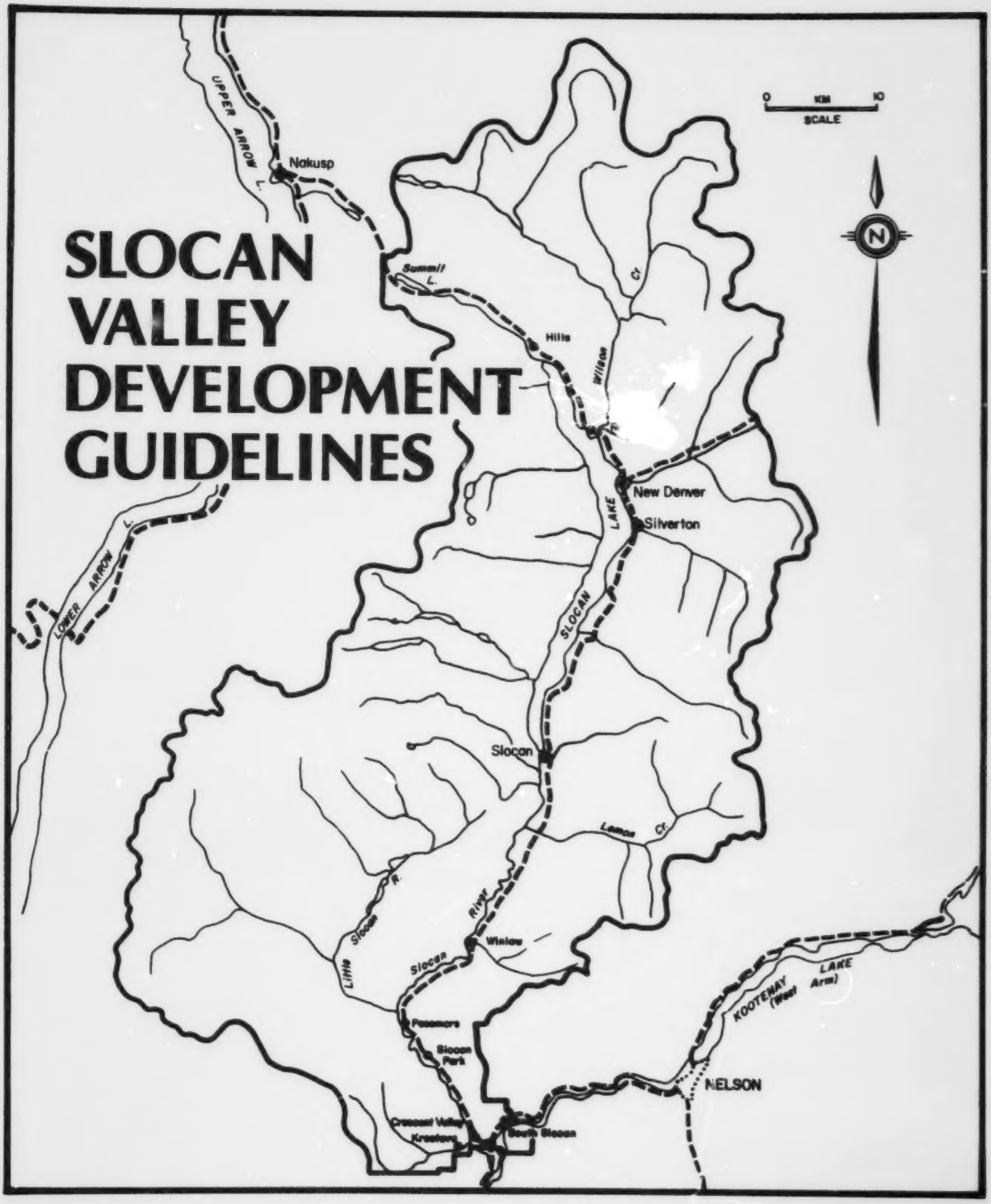
SLOCAN VALLEY DEVELOPMENT GUIDELINES



Province of British Columbia

Regional District of Central Kootenay

Province of British Columbia

Environment and Land Use Committee

Parliament Buildings
Victoria
British Columbia
V8V 1X4

March 27, 1985

Mr. George Cady
Chairman
Regional District of Central Kootenay
601 Vernon Street
Nelson, B.C.
V1L 4E9

Dear Mr. Cady:

The Environment and Land Use Committee of Cabinet has released the Slocan Valley Development Guidelines which have been prepared by a number of Provincial Ministries and your Regional District.

The Committee has noted that many of these guidelines follow standard government policies and practices in resource management. These policies and practices have, however, been consolidated and organized because of the sensitive environment of the valley and its compact geography which tend to concentrate conflicts between land uses.

These guidelines have been prepared to assist land use and resource development activities in the Slocan Valley. The Provincial Resource Ministries represented on the Environment and Land Use Committee will be referring to these development guidelines when undertaking their day-to-day activities in the Slocan Valley.

It is the Committee's hope that the Regional District of Central Kootenay will also follow these guidelines in carrying out its functions.

Copies of the guidelines are being shipped under separate cover.

Yours sincerely,

F.C. Austin Pelton
Chairman

SLOCAN VALLEY
DEVELOPMENT GUIDELINES

Province of
British Columbia

Regional District of
Central Kootenay

December, 1984

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INTRODUCTION

STATUS OF DEVELOPMENT GUIDELINES

The Slocan Valley Development Guidelines are a land use and economic development guide expressing land use and resource management policies of the Province of British Columbia and the Regional District of Central Kootenay. The document provides integrated policy directions and implementation measures to guide the activities of both governments.

The policies apply to the Slocan Valley or Electoral Area 'H' of the Regional District of Central Kootenay as shown on Map No. 1. The Slocan Valley is approximately 100 km long and 60 km wide and lies within the Selkirk Mountain Range with the Arrow Lakes system to the west and Kootenay Lake to the east.

PROCESS FOR PREPARATION

The Guidelines have resulted from a joint planning process conducted during 1981-84 under Terms of Reference approved by the Regional Board and the Environment and Land Use Committee of the Provnce. Regional directors of Provincial Ministries have directed this process on behalf of the Province. An Elected Representatives Committee comprised of the Regional Board members from Slocan, Silverton, New Denver and Area H have directed the process on behalf of the Regional District of Central Kootenay.

Following adoption of the program's Terms of Reference, preparation has involved a seven step process:

Regional Analysis and Issue Identification
Selection of the Planning Area
Resource and Land Use Analysis
Socio-Economic Analysis
Summary of Issues Requiring Resolution
Alternative Regional Land Use and Economic Strategies
Proposed Land Use and Economic Guidelines

Program participants are listed in Appendix 1.

The process has involved an extensive public involvement program including public meetings at four stages of the process, hiring a full-time Community Involvement Assistant, household questionnaires, interest group questionnaires, printing of background technical reports and information tabloids, and examination of a large number of briefs and letters from groups and individuals (listed in Appendix 3). Concerns identified by the public have helped contribute to the definition of "issues", to the policies and the implementation measures.

The issues identified by the public and through analysis were grouped into five broad headings:

Watersheds and Water Management Issues
Integrated Use
Valhalla
Settlement
Diversification of the Economy

These are addressed through the policies.

Considerable background technical information has been assembled during the planning program and published in a technical report series. This information has formed an essential part of the analysis of issues and a critical ingredient of the policies. Technical reports which have been prepared are listed as Appendix 2.

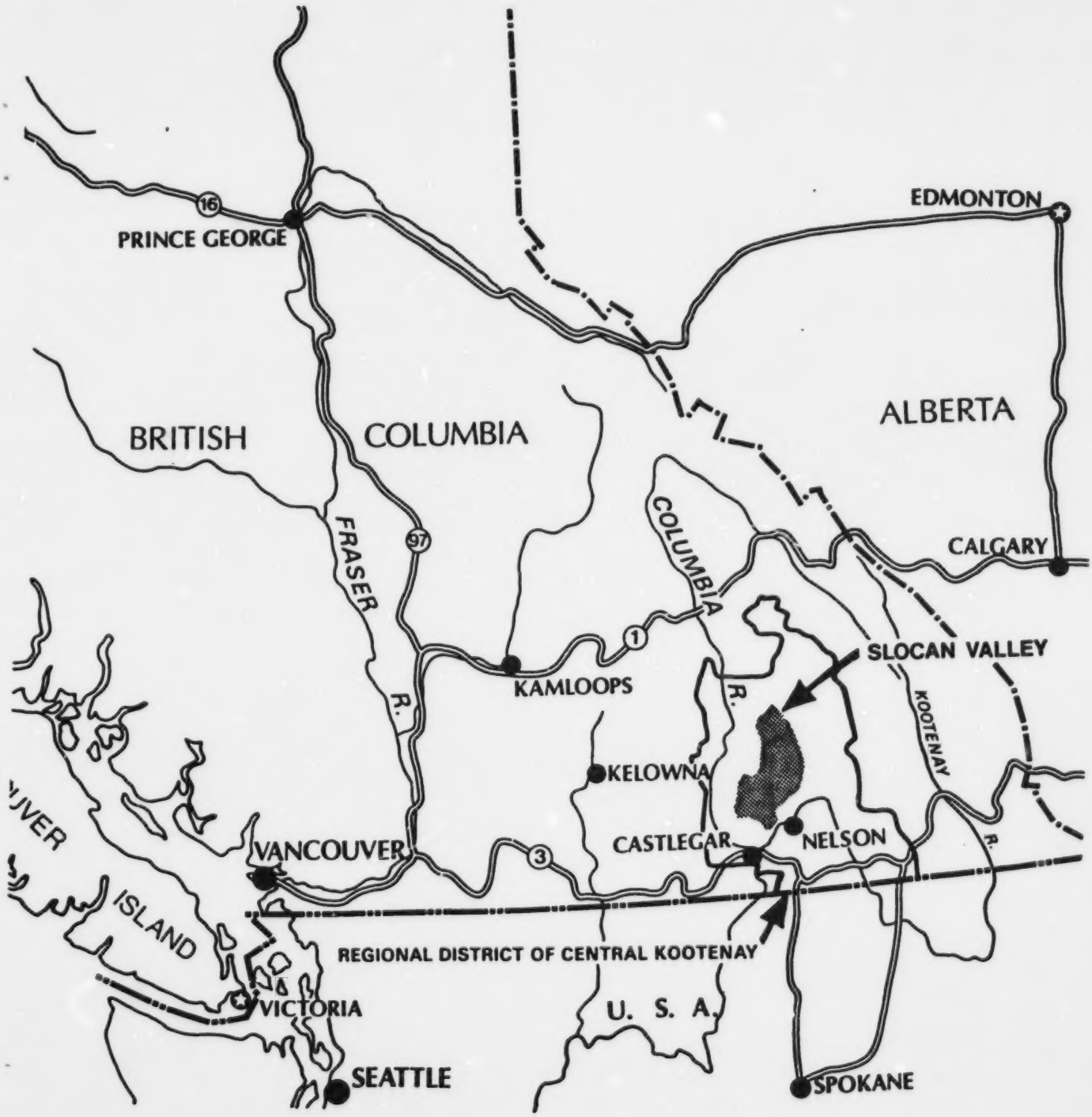
Technical analyses which have been undertaken have examined the capacity of the land base to support existing activities and to diversify with new activities.

Based on technical data and public input during the process, decisions by local and provincial governments were reached on the preferred general development scenario for the Valley, the land allocation choice for the Valhalla Mountain Range, and the approach to planning development activity in sensitive watersheds. Policies and their related implementation measures for these and other issues were established.

INTENT OF THE GUIDELINES

As an expression of land use and resource management policies of the Province of British Columbia and the Regional District of Central Kootenay, this plan is intended to provide policy direction, including the assessment of impacts of any major developments. The plan has encompassed the entire Valley at a mapping scale of 1:125,000 (1 inch equals 2 miles or 1 cm equals 1.25 km). As a consequence, the Guidelines provide comprehensive integrated policy direction on a broad scale, but do not alone address site specific situations. For example, areas of operable forest required by the forest industry are identified, but the location of areas to be logged, location of roads and so on requires more detailed and site specific planning efforts.

The Terms of Reference require preparation of a regional land use and economic development plan. It was revealed through an economic opportunities analysis and analyses of several sectors, that the economic development strategy for this region results from land allocation and resource management policies. By ensuring that land areas for mineral production, timber harvesting and recreation are available for these uses, the options for these contributing to the local economy are retained. As a consequence, this regional land use plan implicitly also constitutes an economic development plan.



LOCATION MAP

MAP 1

Based upon resource, settlement and economic information collected and analysed and upon public input received, three general development scenarios for the future of the Slocan Valley were identified. These were:

1. Status quo - reliance on traditional resource extraction activities;

2. Diversification of the traditional resource extraction base;

3. Diversification of all sectors of the economic base.

Diversification of all sectors of the economy was chosen by the Kootenay Resource Management Committee and the Regional District of Central Kootenay Elected Representatives Committee as the preferred future direction for the Slocan Valley. The policies which follow are intended to guide land use and resource management, and thereby directly and indirectly foster economic development in a number of sectors. For the foreseeable future, resource extraction activities in mining and forestry will continue to be mainstays of the local economy and their land base requirements are provided for and solutions or approaches to solutions to recurrent management problems are identified. As well, an increase in tourism, agriculture, service sector and arts and crafts is projected and the necessary prerequisite conditions for such development will be maintained under the plan in concert with continued resource extraction activities. Achievement of development in all sectors of the economy, however, will depend upon a combination of economic conditions at a scale larger than the Valley, such as external markets and individuals' skills, efforts and level of investment. However, the Valley can, with the Regional District and Provincial government, resolve conflicts and establish courses of action that will facilitate economic decisions by the private sector as external conditions warrant.

Four broad economic objectives have been identified for the Valley and the policies seek to contribute to achieving these:

1. To continue resource extraction activities in mining and forestry as mainstays of the local economy, compatible with other uses.

2. To create an acceptable range of employment opportunities for Valley residents.

3. To reduce the unemployment rate and the extent of underemployment substantially.

4. To diversify the local economy to include appropriate development of the most promising sectors of the economy.

These objectives underlie a number of more specific objectives and policies for each sector of activity which follow in the plan. Officials of the Regional District and Provincial agencies will work to ensure that available funding programs are applied in the Slocan Valley to aid development

proposals which meet the objectives. In addition, efforts will need to be taken to ensure that the private sector is aware of potential opportunities in the area.

EFFECT OF THE GUIDELINES

Adoption of the Guidelines does not necessarily commit the Regional District or the Province to undertake all policies, but does oblige them to proceed in accordance with the policies subject to staffing and budget capabilities.

No new management agencies or new levels of government are created or required, but rather policies are implemented entirely by existing agencies, within their respective management jurisdictions.

A few of the effects of this process are as follows:

- There has been assembled a base of sound information and data at a common scale from a number of interrelated disciplines. Such data not only assists in understanding the location of and reasons for land use conflicts, but also assists to define realistic solutions and assists when any other questions arise in the future.

- Existing policies with respect to management of land and resources have been integrated to minimize future conflicts and aid in their resolution when they arise. In some cases management policies have been identified where none existed previously or were at a different scale. Whether new policies or refinements of previous ones, these give consideration to and are compatible with other activities. The location in which existing policies are applied is identified as a result of this process.

- Existing management practices and procedures will be followed in most cases, but with respect to the common objectives and policies stated specifically for this Valley, rather than at a more general provincial or regional scale.

Throughout this process a number of considerations have been weighed to arrive at policies. These considerations include community wishes and values, biophysical information, socio-economic information, management approaches, as well as existing legislation regulations and management capability. The guidelines should be read in this context.

INTERPRETATION OF GUIDELINES

As noted the function of these guidelines is to co-ordinate the activities of provincial, regional, and municipal governments within the study area.

Because the process is relatively untried in British Columbia, the objectives and implementation measures included here will have to be proven and altered over time. Provision has been made to allow for annual review.

Many of the objectives included in these guidelines are statements of value, subject to interpretation by the reader. The following overview statements are made to limit the extent of conflicting interpretation.

1. POLICIES AND RESPONSIBILITIES

These guidelines are to be interpreted as consistent with existing policy and responsibilities of provincial and local government agencies.

2. ECONOMIC DIVERSIFICATION

The historical economic strength of the study area has been logging and mining. This situation is expected to continue, within the cyclical limitations of marketing restrictions.

It is the intent of these guidelines to enhance the local economy with the relatively unknown income possibilities presented by agricultural and tourism potential.

These guidelines shall be interpreted to facilitate complimentary use of land. It is, for example, the intention to log behind farmland while at the same time reserving water flow for irrigation use.

The implementation of these guidelines allowing compatible uses of land are to be encouraged.

3. THE ROLE OF GOVERNMENTS

Municipalities and the Regional District are responsible for private land use and the Provincial Government for Crown land use. These guidelines call for consultation and negotiation where governments have interests in common and for review of the process in general.

These guidelines shall not be interpreted to invite the provincial jurisdiction over private land use or regional/municipal jurisdiction over Crown land use.

4. PRIVATE LAND USE AND ZONING

These guidelines provide a format for zoning and a basis for comment on land use applications by developers of private land.

Zoning will happen on a community level if a community asks for zoning and if the resulting by-law is acceptable to that community.

At the time of adoption of a settlement plan, or of a zoning by-law in the future, all industrial, residential, agricultural, or commercial uses of land in practice at that time shall be deemed acceptable.

Home occupations have historically served the area and will be encouraged in the implementation of these guidelines.

The Ministry of Environment is committed by these guidelines to produce a site specific floodplain description and no land shall be designated as floodplain except by the Ministry of Environment.

5. GOVERNMENT REFERRAL PROCESSES

Some developments have been held up for years by government and community confusion over what is acceptable land use. This document is intended to short circuit that situation by stating what activities are encouraged, where they are encouraged to happen, and what information is required to facilitate government approval at all levels.

Where conflicts arrive, a conflict resolution process is defined and time limits for resolution are imposed.

Where a developer has attempted to comply with the spirit and substance of these guidelines all assistance should be forthcoming by all levels of government.

Where these guidelines fail to facilitate activity that benefits the region (Valley), that failure should result in changing the guidelines in the annual review process.

6. IMPLEMENTATION

At the time of this writing, these guidelines are proposed. Failure to adopt by either regional or provincial government will not preclude adoption of any or all measures by the other governments included.

Only joint agreement and adoption, however, will initiate the activities in common, the conflict resolution process and the annual review.

7. PUBLIC INVOLVEMENT

All ongoing processes of decision-making described in this plan call for built-in public discussions. This allows for input by residents prior to decision-making.

RESOURCE AND ENVIRONMENT MANAGEMENT POLICIES

Introduction

Development of the Slocan Valley's primary resources in forestry and minerals, has historically provided the impetus for the Valley's development and settlement. Resource extraction continues to be the major source of economic activity. Continued viability of resource extraction, and its co-existence with maintenance of air and water quality, wildlife and fishery resources, recreation and settlement, requires co-ordination of activities within the Valley.

In developing the integrated policies which constitute the regional land use and economic development guidelines, the intention has been to optimize the uses of public and private land consistent with the public goals, existing policies and programs and biophysical capabilities of the Valley. In their broadest form the resource and environment management policies are expressed in Map No. 2, Development Guideline Policy Areas, and Resource Allocation and Management Map No. 3. These policies are expressed in more explicit terms in the following policy statements, as well as in:

- Map No. 4, Forestry and Watershed,
- Map No. 5, Distribution of Mineral Claims,
- Map No. 6, Recreation Systems, and
- Map No. 7, Major Road Network.

Map No. 2, Development Guideline Policy Areas delineates three categories for describing the land management priorities:

Regular Resource Management Area
Sensitive Resource Management Area
Settlement Management Policy Area

Regular Resource Management Area is the majority of the land base of the Slocan Valley and is an area in which there exist relatively few reasons for major conflict between uses. For any such conflicts, successful integration of plan policies and agency programs is likely to be possible under routine management programs of government agencies. In otherwords, normal planning programs and/or interagency referrals preceeding resource extraction activities will be sufficient to meet objectives.

Sensitive Resource Management Area constitutes the Valley corridor of private lands and Crown land and adjoining watersheds, floodplain and numerous areas of priority wildlife habitat. Because of the coincidence of a number of resource values on the same land area, this is most sensitive to disturbance, most likely to result in conflicts between actual or potential uses and accordingly is the area in greatest need of detailed planning and sensitive management practices. Most policies relative to resource extraction in

domestic water supply watersheds, agriculture, settlement, visual management, water management and waste management will apply specifically to the sensitive resource management area. For example, in this area, an integrated watershed planning process as outlined in this document will be followed prior to commencing logging in those water supply watersheds with high sensitivity to disturbance. Watersheds within the Sensitive Resource Management Area will be planned as a unit at the landscape level, but operational planning will focus on specific parts. Thus, while planned as a unit, an entire watershed may not necessarily be planned at the same intensity throughout and the total area may be larger than is suggested by the line on the map. In very large watersheds, intensive operational level planning will not occur throughout the entire watershed when logging is proposed in only one or two smaller side drainages.

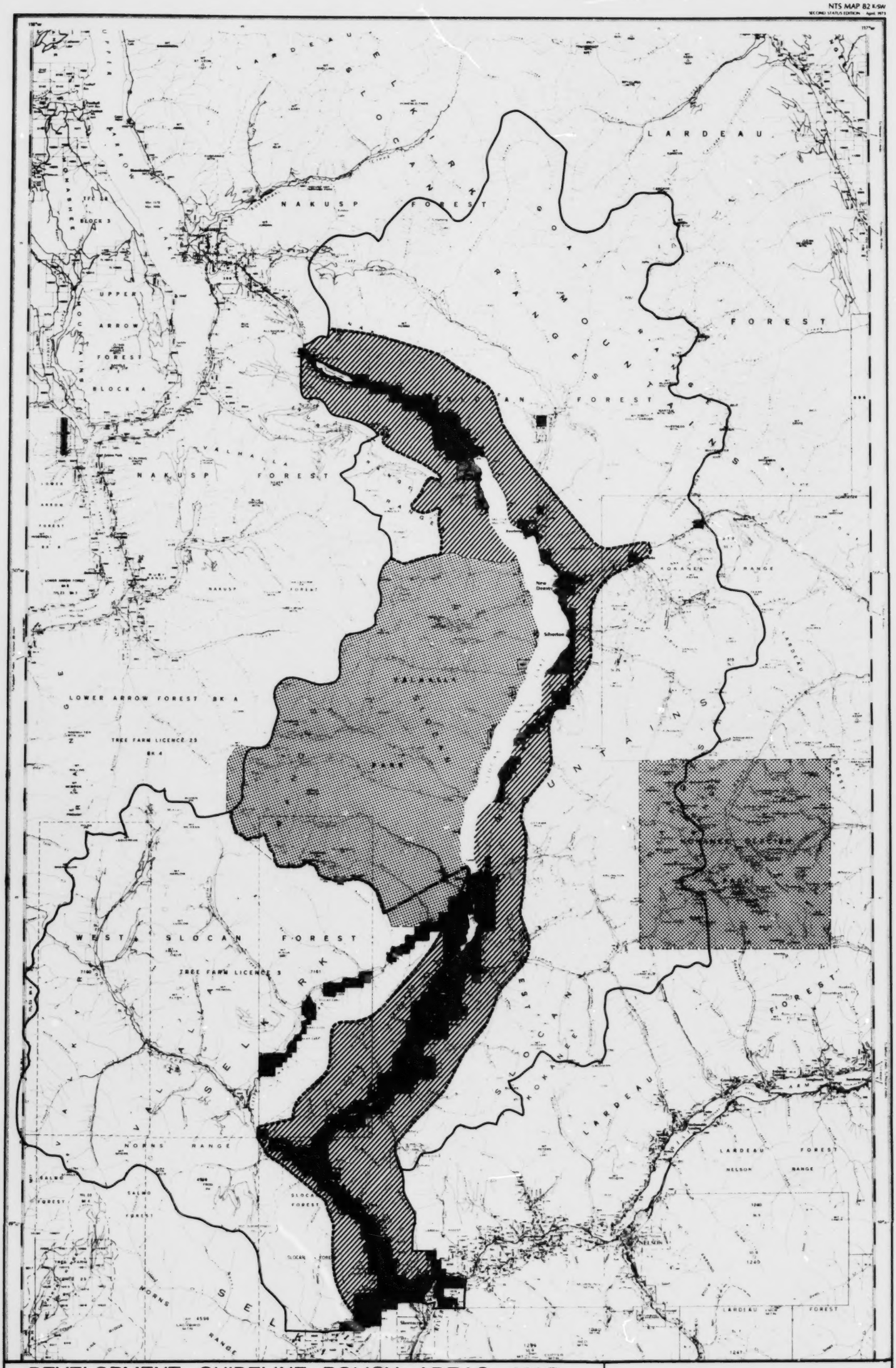
Resource Allocation and Management Map No. 3 identifies the location of areas with particular capabilities to which references are made in policies. These are:

Agriculture - Lands contained with the Provincial Agricultural Land Reserve, whether or not these are actively used for agricultural purposes.

Operable Forest - Forest land as defined by the Ministry of Forests as being economic for forestry. Definition is based upon slope, soils and productivity and does not imply anything about the characteristics of present ground cover, ie., mature forest, immature forests or not restocked. Operable forest changes as technology and markets change.

Non-operable Forest - Forest land considered to be of doubtful use for logging. Only 10 percent of the timber yield from this land is considered harvestable. Those very characteristics which make it uneconomic for logging may make it valuable for uses such as recreation or mining. The majority of non-operable forest land east of Slocan Lake contains very high mineral potential and numerous deposits that are being explored and may be developed in the future.

Priority Deer Winter Range - The most important areas of low elevation winter browse for ungulates.



DEVELOPMENT GUIDELINE POLICY AREAS MAP

LEGEND

- Area H Boundary
- Regular Resource Management Area
- Settlement Management Policy Areas
- Sensitive Resource Management Areas*
- Provincial Park

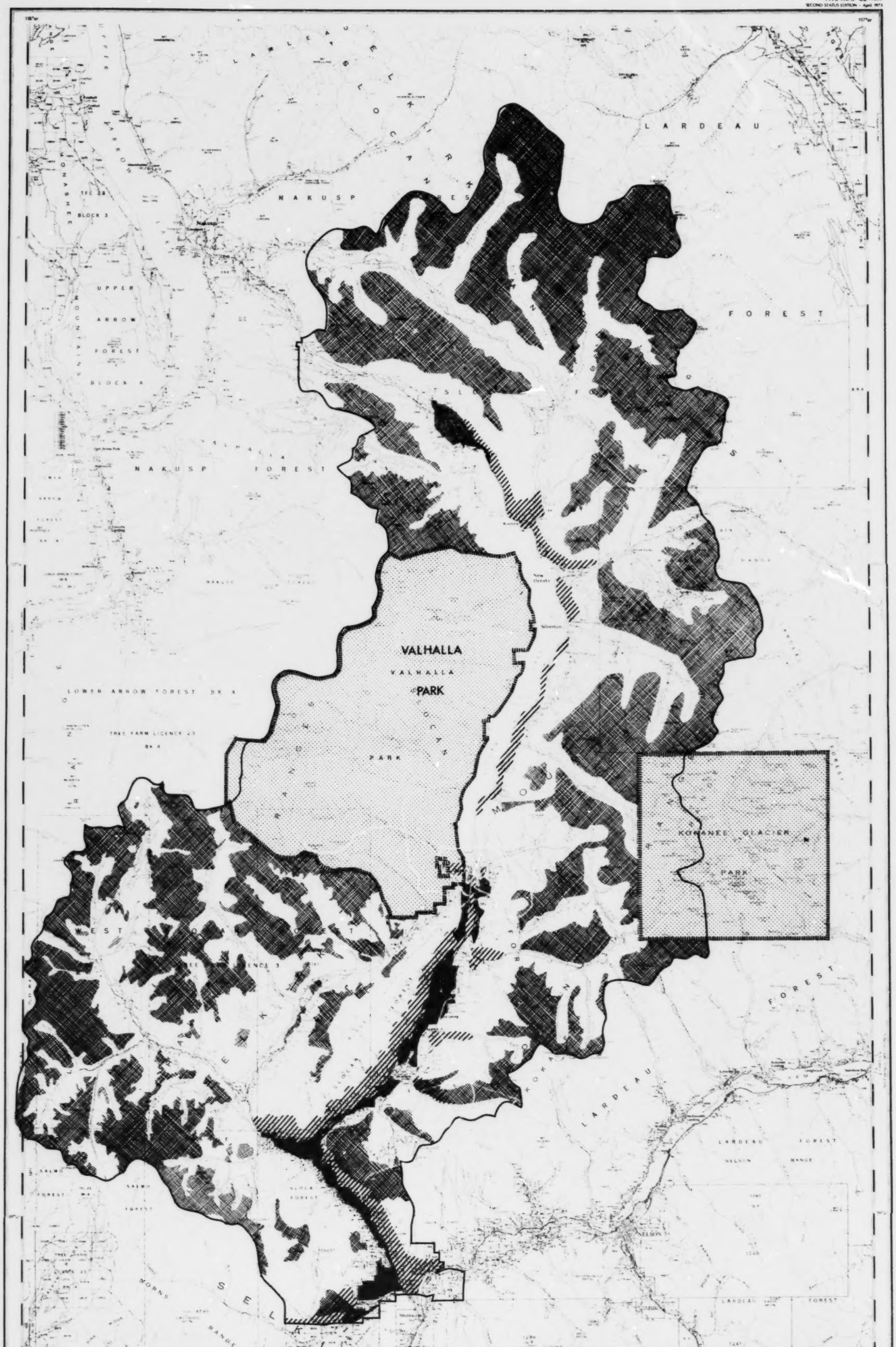
* WATERSHEDS WILL BE PLANNED AS UNITS HENCE TOTAL AREA MAY BE LARGER THAN IS SUGGESTED BY DELINEATION OF THE SENSITIVE RESOURCE MANAGEMENT AREA

DATE: 1984 | PREPARED BY REGIONAL DISTRICT OF CENTRAL KOOTENAY PLANNING DEPARTMENT

SLOCAN VALLEY PLANNING PROGRAM

SCALE

MAP 2



RESOURCE ALLOCATION AND MANAGEMENT MAP

LEGEND

- Area H Boundary
- Provincial Park Boundary
- Agriculture
- Operable Forest
- Non - Operable Forest
- Priority Deer Winter Range

DATE: 1984 | PREPARED BY REGIONAL DISTRICT OF CENTRAL KOOTENAY PLANNING DEPARTMENT

SLOCAN VALLEY PLANNING PROGRAM

MAP 3

FORESTRY

Statement

Forest land under the jurisdiction of the Ministry of Forests constitutes the vast majority of the Valley land base. Benefits derived from the forest land base are diverse from recreation, water production, wildlife habitat, scenery through to logging and mineral extraction. The management of forest lands is thus central to the attainment of most of the integrated policies of this plan.

The forest industry is presently a major sector of employment in the Slocan Valley providing a livelihood for 36 percent of the labour force.

Slocan Forest Products Ltd., in outlining impacts of their Slocan mill, reports generation of an average 1,106 jobs per year in the period 1977-81. In the same period, $26,500,000 was spent by the Slocan mill each year in British Columbia and $11,000,000 in the region. $15,236,000 was paid out to employees and contractors. (Figures submitted by Slocan Forest Products, March, 1982).

The forest land base is characterized by mountainous, rugged terrain as are many parts of British Columbia. Fifty-four percent of the Slocan Valley is considered "forest" and 36 percent of the Valley is classed as "operable forest". Of the total Valley land area, 4 percent is good productivity sites and 14 percent medium productivity sites, and the remainder of the operable forest is classed low to poor for forest productivity.

General Objectives

- Provide for the continuity of timber supply of sufficient size and quality at an acceptable economic, environmental and social cost, as to maintain a continuing forest economy. To also manage, protect, and conserve forest recreation, range, water and other values from the forest land base to meet a number of economic objectives;

- Maintain or enhance forest productivity through the specific policies and implementation measures which follow.

a) Allowable Annual Cut and Forest Management

Statement

Following analysis of timber supply, demand, public issues and social and economic objectives, the Chief Forester determines an allowable annual cut representing the volume of timber which may be logged from each timber supply area each year. The total volume is apportioned among a number of operators, except for a small amount held for Ministry of Forests' Reserve and a larger portion which is advertised under the Small Business

Enterprise Program. The level of or total volume in the allowable annual cut has implications for potential economic activity in the Valley, and probable extent of logging. The level of allowable annual cut, thus, has a great deal to do with community stability, integration of resource and land uses, and can contribute to land use conflicts and public concern. It has been noted that the public and the Regional District have a strong desire for local milling of local timber in order that there be continued employment and economic benefits.

Objectives

- The Chief Forester determines an allowable annual cut with sufficient flexibility to allow for integration, conservation and enhancement of other resource values, while protecting the continued productivity of the forest land base as a major contributor to the local economy.

Policies

1. Based on management objectives and planning processes and through use of the Ecological Classification Guide, the Ministry of Forests shall require additional consideration of alternatives to clear-cutting in the management of the forest land base.

   Implementation

   - The allowable annual cut for the Arrow Timber Supply Area has been set at 619,000 m3, effective February 16, 1983.

   - A basic biophysical inventory will be undertaken to determine appropriate logging methods. This is presently done for the issuance of each cutting permit.

   - The Ministry of Forests shall contribute summary data to interested parties, as time permits.

2. Management objectives should reflect an explicit policy of preserving a variety of old growth timber for a variety of requirements.

3. During assessment of timber supply, economically inoperable timber is eliminated from the allowable annual cut.

4. The outcome of more intensive planning activities such as watershed, wildlife, etc. shall be considered as input at the time of five year review of AAC under the Timber Supply Analysis program.

5. Within the constraints of the Five Year Forest and Range Resource program approved by the Provincial Legislatiure, every effort will be made to rehabilitate high productivity sites, and provide for restocking of NSR sites. Forest licensees also have reforestation responsibilities, depending upon tenure.

6. The Ministry of Forests shall ensure that a full range of silvicultural treatments and regeneration prescriptions shall be made prior to harvesting. Prescriptions are established through the use of the Ecological Classification Guide (accepted standard) which is a compendium of biophysical information for the Nelson Region.

Implementation

- Arrow District will designate one or two area technicians to serve as contact people.

- Audit responsibility rests with District Managers, but day to day responsibility will be assigned to Area Technicians. Specialists become involved as necessary.

b) Wood Utilization and the Secondary Forest Industry

Statement

Due to automation in the Forest Industry, increased secondary forest industry uses will be required to maintain and possibly increase existing employment levels.

Objectives

- Ministry of Forests, in implementing government policy on timber allocation, will strive to maintain sufficient flexibility to provide access to timber supplies required for viable diversified uses.

- Ministry of Forests, along with the forest industry, seeks methods for better utilization of problem forest types.

Policies

1. Improved utilization will be encouraged by Ministry of Forests during the manufacture of forest products from timber.

Implementation

- Ministry of Forests shall assist prospective entrepreneurs with the identification of additional economic opportunities available and within the Timber Supply Area, Small Business Enterprise Program and related programs, and allow access to this timber for new and expanded forest industry developments in the Slocan Valley.

- Ministry of Forests will continue to evaluate opportunities related to expanding utilization of presently unutilized low grade timber. Opportunities to be reviewed include the feasibility of establishing a chipping facility in the Valley and utilization of

wastes, as outlined in the Economic Opportunities Study. Readers may wish to examine existing reports on Timber Supply Analysis and the Southeastern B. C. Fibre Study, and any applications for a pulpwood agreement covering Nelson Forest Region and part of Kamloops Forest Region available for public viewing.

2. The Economic Development Commission of the Regional District of Central Kootenay shall continue to identify potentially viable economic opportunities and assist in the implementation of viable forest opportunities in the Slocan Valley Economic Opportunities Study.

c) Access

Statement

The location of and phasing of development of a road network has important ramifications for resource extraction, other resource values and private lands. The degree of efficiency in the location, construction and maintenance of resource access roads affects economic viability of resource extraction for both logging and mining. Wherever possible, roads should be sited to benefit multiple purposes, ie., logging, mining, recreation, and the number of roads kept to minimum and locations carefully chosen to decrease costs and undesireable impacts on other values, ie., wildlife, visual, watersheds, settlements.

It has been noted that the public and the Regional District have a strong desire for the Crown to build or pay for (through Section 88 Funds) the construction of roads into watersheds.

Objectives

- Develop access to timber in the most efficient manner possible, without significantly affecting other uses or values.

- Maintain recreation access consistent with overall access plan requirements and needs.

Policies

1. By December 31, 1985, a generalized plan for a 20 year period will be finalized by the Ministry of Forests to provide for the efficient extraction of timber over the long term while facilitating other land uses and resource developments such as mining and recreation. When this access plan is finalized and approved, the Regional District of Central Kootenay and the Approving Officer of the Ministry of Transportation and Highways will incorporate it into future settlement planning and subdivision approval in order to ensure that this access is kept open.

Implementation

- Detailed access plans will be subject to review and input by other resource agencies, the Regional District and the public prior to finalization and construction.

d) Development in Consumptive Use Watersheds

Statement

The existing pattern of spread out rural settlement and extensive licensing of surface water for consumptive uses (primarily domestic and irrigation) has resulted in a situation where resource extraction in these watersheds creates a potential for damage to water quality. The soil and slope characteristics found in the Slocan result in highly variable degrees of sensitivity to disturbance. In some watersheds considerable damage to water quality may result from logging or road building activities, while in other watersheds the susceptibility to damage will be substantially less. To safeguard affected interests while allowing for sensitive logging practices, and other types of development, an integrated watershed planning process has been developed and incorporated into this document. See Map No. 4 showing operable timber areas and consumptive use watershed boundaries.

It should be noted that ambient water quality standards for naturally occurring water bodies are separate from Ministry of Health's drinking water standards.

Policies under the heading "Water Management" should be referred to in concert with those which follow.

Objectives for Water Quality and Quantity

- Maintain water quality at a level that meets ambient water quality standards and is adequate for domestic, irrigation and fisheries purposes. Variations from natural causes are anticipated and managment induced changes will be minimized.

- Implement a planning process by which affected parties can participate in the preparation of plans for resource developments in sensitive watersheds prior to development activity in these areas. The planning process is to be based on the principles contained in the Slocan Valley Integrated Watershed Planning Process.

- To maintain or reduce peak flows, thereby minimizing potential for flooding and erosion damage.

- To maintain or increase flow during low flow periods in all watersheds.

Policies

Note: Additional objectives and policies are contained in the section entitled, Water Management.

1. In the majority of consumptive use watersheds in the plan area, in integrated management the water resource shall have primary consideration over other land/resource considerations. However, in a few watersheds, because of their size relative to the small amount of licensed use of the water resource, it may receive a lesser priority, while still meeting water management objectives.

2. Each watershed will be subject to planning prior to development. Operational activities will not be scheduled in consumptive use watersheds until analyzed for watershed sensitivity and economic feasibility according to the format and procedure in the planning process shown in Appendix 4. Planning will occur at general (landscape unit) and specific (operational) levels consistent with the process outlined in Appendix 4.

3. Operational activities will be designed, monitored and modified as necessary to meet the performance standards derived during the watershed planning process.

4. The performance standards will reflect the need to maintain traditional volumes of stream flow and to meet health standards.

5. Land use activities will be conducted in such a manner that stream channel integrity will be maintained. The location and timing of operational activities will be planned in such a way that increases in peak flows and stream channel disturbance are minimized.

Implementation

- The Ministry of Forests and the Ministry of Environment, and other Ministries as appropriate, will employ a watershed planning process in consumptive use watersheds which includes the following elements:

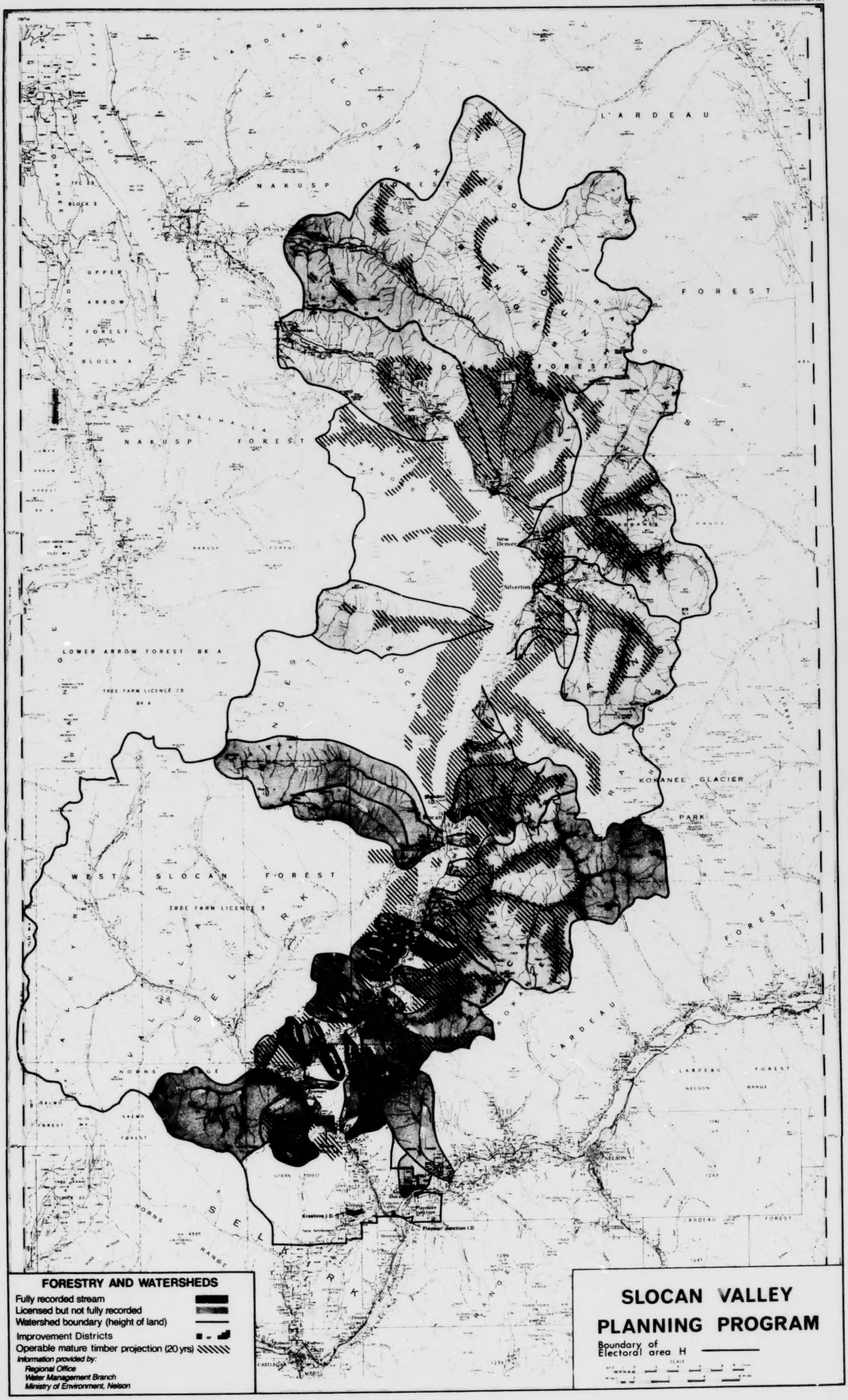
  (a) identify the natural risk to water quality;

  (b) identify the management induced risk to water quality;

  (c) identify water licensing and flow information;

  (d) make go/no go decisions on resource development;

  (e) identify the most appropriate silviculture systems and performance standards;


NTS MAP 82 K/W
L'ARDEAU
NAKUSP
UPPER ARROW FOREST BLOCK A
NAKUSP FOREST
VALHALLA
FOREST
LOWER ARROW FOREST BK A
TREE FARM LICENCE 23 BK A
WEST SLOCAN FOREST
TREE FARM LICENCE 5
KOKANEE GLACIER PARK
SELKIRK
SLOCAN
NORNS RANGE
NELSON
LARDEAU FOREST
Silverton
New Denver
Kaslo
Slocan
Playmor Junction
Playmor Junction I.D.
Krestova I.D.
FORESTRY AND WATERSHEDS
Fully recorded stream
Licensed but not fully recorded
Watershed boundary (height of land)
Improvement Districts
Operable mature timber projection (20 yrs)
Information provided by:
Regional Office
Water Management Branch
Ministry of Environment, Nelson
SLOCAN VALLEY
PLANNING PROGRAM
Boundary of Electoral area H
SCALE

MAP 4

(f) supervision and monitoring of the management activities;

(g) means to resolve disagreements between resource users regarding plan implementation. (see chapter on "Implementation").

e) Landscape Management

Statement

The visual quality of the Slocan Valley landscape is a major factor valued by residents and attractive to tourists. Policies which follow are intended to keep visual impact to a minimum by managing resource extraction in the primary visual areas. The policies will not preclude mining activity, nor will they apply to private land. See Appendix 5 for further clarification on landscape management.

Objectives

- To maintain visual quality in the primary visual areas, compatible with other uses. These areas are shown on the map in Appendix 5 and approximately correspond with the "Sensitive Resource Management Area" shown on Map 2.

Policies

1. Landscape management shall be an objective in the Sensitive Resource Management Area. It is recognized that a number of uses will occur within the Sensitive Resource Management Area but with regard for the maintenance of visual quality.

   Implementation

   - Ministry of Forests has conducted a landscape inventory and corridor analysis for the Slocan Valley. The inventory entailed mapping the visible landscape as seen from highways, settlements and recreation areas (Slocan Lake and Idaho Lookout), then dividing the visible areas into landscape units (areas of landscape similarity) and rating each unit as having low, medium or high landscape sensitivity.

   - In the corridor analysis, those areas rated as having medium or high landscape sensitivity were again evaluated and given Visual Quality Objectives (VQOs). (See Appendix 5 for map and explanation of VQOs). VQOs specify the degree of alteration that is acceptable for each landscape unit. For the Slocan Valley they included Preservation, Retention, Partial Retention and Modification. Partial Retention is the predominant VQO applied in the Slocan Valley.

- Ministry of Forests will apply its landscape planning approach to developing or approving resource access roads, approving harvesting patterns, and selecting silvicultural treatments. This landscape planning approach does not hide logging. Rather it seeks to harmonize changes with the landscape. As the Sensitive Resource Management Area includes areas of high visual quality, consumptive use watersheds, key wildlife habitat, and mineral properties, opportunities for public review of landscape analyses and timber development plans will precede issuance of cutting permits. Planning for visual resources will occur at a general and a specific scale.

2. In primary visual areas, access roads through private and Crown land will be coordinated and sited so as to maintain landscape management objectives.

Implementation

- Ministry of Forests is the permit-granting authority for tree removal on Crown land for any resource access road, and will apply their landscape criteria when considering permit applications. These procedures have existed for a number of years and exist independent of the plan. Other factors will be considered when reviewing applications including cost, soil stability, the major road network plan, the generalized access plan and a range of forest management objectives.

- Ministry of Transportation and Highways will have regard for visual impact and where appropriate, consult with other provincial agencies when considering applications for access approval.

- Ministry of Energy, Mines and Petroleum Resources, when reviewing proposed access roads and developments on mineral properties, will have regard for landscape management objectives, landscaping and buffer strips of vegetation, consistent with their reclamation guidelines.

f) Woodlots and Private Forestry Land

Statement

Much of the lower elevation land is held in private ownership and soil and climate conditions generally dictate this to be highly productive for forestry. Timber harvested from private land has historically been an important source of income for land owners and continues to make a small but significant contribution to the total volume of wood harvested and milled. There are indications that forest productivity on private land could be improved.

There is a strong local desire for implementation of a woodlot program for Crown lands which adjoin private parcels. Present Ministry of Forests' guidelines are that a minimum of 1 percent of the allowable annual cut within each Timber Supply Area will be designated as woodlot. The maximum size of a woodlot will be 400 hectares.

Objectives

- To encourage private landowners to practice forest management on private land and approved Crown woodlots.

Policies

1. Within the guidelines of the apportionment plan for the Arrow Timber Supply Area, Ministry of Forests will assess applications for woodlots against the Ministry's criteria for the establishment of woodlots.

2. The Ministry of Forests will give close consideration to local woodlot applications and improving the Provincial Woodlot Program, thereby increasing timber productivity and quality on both Crown Forest and forest land held in private ownership.

3. Ministry of Forests, with assistance where appropriate from, Ministry of Education, Ministry of Universities, Science and Technology and educational institutes will provide advice in woodlot establishment and management within constraints of available funding.

4. Local government and the Ministry of Forests shall encourage private landowners to manage their lands within consumptive use watersheds in a manner consistent with policies and environmental protection guidlines applicable to adjoining Crown land.

g) Range Management

Statement

Members of the farming community in the Valley wish to have access to Crown range for grazing purposes. Presently thre is no Crown range committed to cattle grazing and no Ministry of Forests funds are available at this time for range improvement. Other sources of funds such as ARDSA may potentially be available through the Ministry of Agriculture and Food. In present circumstances, provincial staff have concluded that there is no long range physical potential for major range improvement in the Slocan Valley. When and if suitable areas become available the merits of permitting use for grazing cattle in these areas will be appraised.

h) Forest Land Recreation

Statement

Crown land under Ministry of Forests' management provides a number of highly significant recreation features and trails which form a valuable part of the recreation plan. These recreational opportunities are valuable and receiving increasing levels of use.

Objectives

- To provide and expand the availability of multiple-season recreation site and trail opportunities within the Provincial Forests.

- To provide additional sites and trails consistent with TSA recreation priorities, the TSA plan, and as demand increases.

Policies

1. Ministry of Forests will continue to maintain existing recreation sites and trails.

2. Ministry of Forests will provide additional sites and trails consistent with the Recreation Systems Plan, as demand increases and funding is available.

3. Ministry of Forests' recreation sites and trails will, whenever possible, be situated to minimize potential conflicts with mineral exploration and extraction activities in well-documented mineralized areas.

4. Access for recreation purposes will be considered when assessing road use and road closures on forest land.

5. Ministry of Forests recreation sites and trails will, whenever possible, be situated to minimize potential conflict with wildlife habitat area concentrations.

WATER MANAGEMENT

Statement

Maintenance of the present high quality of surface water is a high priority for Valley residents. Aside from five community water systems serving the three villages and other population concentrations, the vast majority of domestic and irrigation water is obtained under water licenses from surface water sources. The majority of major creeks, as well as numerous small creeks and springs are licensed for domestic and/or irrigation use and provide relatively low-cost water to residents.

Surface stream flow is licensed throughout the settled areas of the Valley and considerable care is required to maintain water quality when logging, mining, road building or settlement are occurring in watersheds. (Policies under Forestry, Mining, Settlement and also Appendix 4 deal with planning prior to development in watersheds).

The fact that 70 percent of the total yearly water yield occurs in the April to July period with peak flows occurring in early June has a major effect, not only upon the reliability of water supply, but also on potential for flooding and erosion.

Water for drinking, culinary and other domestic uses should be safe, palatable and aesthetically appealing. It should be free from pathogenic organisms, hazardous chemicals and radioactive substances and objectionable colour, odour and taste.

The physical characteristics of water affect the aesthetic quality of drinking water and consequently have the greatest subjective impact on the consumer. The microbiological quality of water is important because of its association with water-borne disease. Chemical and radiological characteristics of water are important because of their hazard to the health of people if present above certain concentrations. They are also of growing concern because of increasing awareness of pollution in the environment.

Objectives

- To manage the water resource to meet requirements (waterworks, domestic, irrigation, fisheries, industrial) by allocation of the water resource through a licensing system and monitoring of its use.

- To maintain and/or enhance water quality at a level that meets ambient water quality standards.

- To maintain or increase the base flow in all consumptive use watersheds consistent with integrated use.

- To minimize the potential for damage and loss of life caused by flooding and erosion.

- To foster public awareness of the water resource and relevent legislation.

Policies

1. Water supplies will be assessed in relation to projected demands for domestic, irrigation, fisheries and other purposes and reserves shall be designated as warranted.

   Implementation

   - Ministry of Environment, Water Management Branch will identify water availability and determine priority water use for all consumptive use watersheds. Projected needs will be documented a decade into the future.

2. Notwithstanding timber licensees' responsibilities for maintenance and restoration of water supplies as outlined in the integrated watershed planning process, individual water users have a responsibility to ensure that their water systems are capable of providing primary treatment such as infiltration, screening and settling to alleviate natural variations in water quality to meet the requirements and policies of the Ministries of Health and Environment.

   Implmentation

   - The Ministries of Environment and Health will distribute, through their offices and the Regional District, information on surface water systems appropriate for rural areas.

3. In consumptive use watersheds, careful review of all development activities must be undertaken, ie., road construction, subdivision, mining and logging (see Forestry-Development in Consumptive Use Watersheds).

   Implementation

   - See policies and implementation measures under the heading "Forestry-Development in Consumptive Use Watersheds".

   - Ministry of Transportation and Highways will consider these matters when reviewing road access and subdivision applications.

4. Community water systems will be required for any new high density subdivision, consistent with the Water Utility Act, Water Act and Health Act.

   Implementation

   - Regional District settlement plans will specify locations where community water systems are advisable.

- All new and existing community water systems must meet Health Act requirements, in addition to the requirements of other Acts.

5. Development will be regulated on floodprone land and in areas subject to mass movement in order to minimize potential for property damage and risk to human lives.

Implementation

- Ministry of Environment will complete floodplain mapping for the Slocan River to delineate the 200 year floodplain boundary. Restrictive covenants will continue to be placed on floodprone lands such as alluvial fans and areas below the 200 year floodplain boundary to help minimize flood damage.

- Settlement plans and zoning, when completed, will clearly identify and restrict uses on such floodprone lands.

6. Where required to minimize flooding and erosion, Ministry of Environment shall require operators to remove from water bodies any substance or thing which may pose an environmental hazard.

Implementation

- Ministries will work co-operatively with landowners to resolve the flood problem.

WASTE MANAGEMENT

Statement

Environmental quality of the Slocan Valley is rated highly by those residing in and visiting the area. Smoke from Slocan Forest Products' beehive burner appears to be the major waste discharge issue for the Valley. The recent installation of a heat recovery unit has diverted dry fuel from the burner, which has resulted in excessive burner emissions. The discharge will continue to be regulated under the terms of the Waste Management Permit.

The other issues related to waste management, as identified by the public, include municipal refuse disposal sites and mine tailings.

Objectives

- To manage and dispose of wastes in such a way as to maintain a high quality, healthy environment.

Policies

1. Existing air and solid waste management programs and smoke ventilation indices as required by the Ministry of Forests will continue to be applied in the Valley.

2. Ministry of Environment, in consultation with the Ministry of Health, shall develop ambient water quality guidelines for application within the Slocan Valley pertaining to drinking water and suspended solids.

3. The Regional District shall, with technical assistance of the Ministry of Environment, identify alternative waste disposal sites.

Implementation

- The Ministry of Environment, through its strategic planning process and in consultation with the Ministry of Health and the local public health authority, shall establish and implement ambient water quality standards suited to the Valley.

- The Regional District shall initiate solid waste planning and site location studies to reserve sites suitable for solid waste disposal.

- The Regional District shall develop a Waste Management Plan for the Slocan Valley to identify its future strategy for solid refuse disposal within the area.

MINING AND AGGREGATES

Statement

The Slocan has had a long and illustrious history of mining with levels of activity fluctuating greatly in response to metal prices and technological changes. In the 1980's the Slocan mining camp was the most productive in the Province. Peak production occurred in 1918. Traditional minerals produced have been silver, lead and zinc, however possibilities exist for the occurrence of other types of economically significant mineral deposits. Investments in exploration and option payments on claims are known to be locally significant sources of income.

Ministry of Energy, Mines and Petroleum Resources data shows 119 deposits which have produced 100 tonnes or more and almost as many deposits which have produced less. Total mineral production in 1980 had a value of approximately 8.4 million dollars. Cumulative production for the period 1960 to 1980 represented a value of more than 154.5 million dollars and was comprised of the following metals in order of significance: silver (88%); lead(6.7%); zinc (4.1%); gold (1.0%); cadmium (0.2%) and copper (0.001%).

The major valley bottoms contain important reserves of sand and gravel deposits. Easily accessible and well sorted aggregate deposits for highway and industrial use are uncommon. High bulk and transportation costs associated with extraction necessitate detailed planning to identify and reserve deposits for future use. Following extraction, suitable reclamation for alternate uses will occur.

Objectives

- To provide for and encourage mineral exploration, development and production activity as a continuing contributor to the Slocan Valley and Provincial economies, in a manner consistent with current Provincial policies.

- To identify and protect sand and gravel resources to meet future requirements and to suitably reclaim extraction sites.

Policies

1. Continue to provide the opportunity for access to potential mineral areas and traditional mining camps, with the exception of areas excluded by Orders-in-Council.

2. The Ministry of Energy, Mines and Petroleum Resources will participate in the integrated watershed planning process to ensure the orderly exploration and development of mineral properties consistent with integrated watershed plans.

3. The Ministry of Energy, Mines and Petroleum Resources will continue to maintain district geological, engineering, inspection and reclamation services and expertise to assist and encourage the industry.

4. Ministry of Transportation and Highways will, in conjunction with Regional District's land use policies, identify, protect and where appropriate, acquire gravel resources to meet present and future public and private needs.

5. Access will be co-ordinated for greater efficiency and developed to reduce impacts on resources such as visual, fish, wildlife and settlement while providing for a range of anticipated uses.

Implementation

- The Ministry of Energy, Mines and Petroleum Resources, and the Ministry of Forests, when reviewing proposed activities on mineral properties will consider co-ordination of access along with other factors addressed in this plan presently considered as part of current approval procedures.

- The Ministry of Parks shall review its policy on Kokanee Glacier Park in regard to mining.

6. Settlement will be discouraged where mineral rights, in regard to mining, may result in land use conflicts, where critical access routes exist to mineral properties, and where valuable aggregate resources have been identified (Map No. 5). All subdivisions proposed in areas of known mineralization according to the background data prepared for this plan, will be referred by the Regional District of Central Kootenay to the Ministry of Energy, Mines and Petroleum Resources for comment.

Implementation

- When prepared settlement strategies and land use controls on private land in the Regional District of Central Kootenay will discourage settlement or provide for low density settlement in areas of present mineral claims.

- Applications for gravel extraction will be assessed relative to impacts on settlement and water supply watersheds.

- Applications for gravel extraction permits will be referred to the Regional District by Inspection and Engineering Division, Ministry of Energy, Mines and Petroleum Resources for information and comment. Submissions from the Regional District concerning applications for extraction permits will receive the same consideration as all other submissions.

7. Development of a public information program on mining will be encouraged.

Implementation

- The Regional District's Economic Development Commissioner will encourage the Ministry of Energy, Mines and Petroleum Resources, the Chamber of Mines and the Heritage Conservation Branch to develop interpretation and public information programs.

SLOCAN VALLEY PLANNING PROGRAM

BOUNDARY OF ELECTORAL AREA H

MAY 1981

DISTRIBUTION OF MINERAL CLAIMS

MINERAL CLAIMS

PLACER LEASES

1:125,000

NELSON

NEW DENVER

SLOCAN

KOKANEE GLACIER PARK

SLOCAN LAKE

KOOTENAY LAKE

WINLAW

NAKUSP

UPPER ARROW LAKE

LOWER ARROW LAKE

BURTON

CASTLEGAR

NO STAKING RESERVE

Columbia River

82K 82F

Province of British Columbia

Ministry of Energy, Mines and Petroleum Resources

D-139

MAP 5

AGRICULTURE

Statement

Commercial agriculture in the Slocan Valley began in the late 1800's in response to the area's increasing population caused by the mining boom. Most of the sub-region's agricultural development, which largely revolved around horticulture crops, occurred during the early 1900's. By the mid 1920's production declined due to poor markets and to disease problems.

Presently very little commercial agriculture exists although 4,808 hectares are within the Agricultural Land Reserve (A.L.R.). However, presently only 989 hectares or 19 percent of the A.L.R. lands are being utilized producing an estimated $268,000 in annual gross sales. Based on 1976 Census data, the 127 farms are small scale both in nature (89 percent gross less than $2,500) and in size (averaging between 10 to 20 acres). The majority are involved in mixed and cattle farming.

Due to available A.L.R. land, to essential resources such as soil, climate and water, and to present resident interest, potential does exist to expand the Valley's agriculture industry. With improved productivity, Ministry of Agriculture and Food officials state annual gross revenue from present acreage under production could be increased by 18 percent. An assessment of potential gross receipts (based on various assumptions) for an additional 1,520 hectares not being farmed indicates a possible total of $4.7 million. If agriculture expanded to a point where 3,508 hectares of Agricultural Land Reserve land were brought into production a potential exists for $10.8 million in gross receipts. Increased agricultural production on certain lands will be constrained by the need for flood and erosion control and drainage.

Suggested products for increased production include; berries, apples, vegetables, forage, beef, specialty meats, seeds and nursery stock. Initially marketing of products by regional farmers markets and by local highway stands could be viable. As the level of productive land increases, more elaborate marketing mechanisms and storage/processing facilities then could be established on an incremental basis.

There are flooding and erosion problems along the Slocan River from Slocan City to the confluence with the Kootenay River. The main problem area is over a length of 7.5 miles between Slocan Lake and Perrys. Lemon Creek appears to be a cause for problems due to aggregation, erosion and channel diversion. The majority of the land flooded or eroded has been determined to be prime agricultural land.

Various remedial measures have been proposed in the past in a number of engineering reports.

- remove by excavation the blockage on the Slocan River formed by gravels deposited by Lemon Creek.

- excavate a wide channel for Lemon Creek to allow for maximum flows as well as gravel deposits.

- construct bank protection and channel work downstream of Lemon Creek to accommodate higher velocities created by blockage removal.

- construct guide banks on either side of Lemon Creek.

The estimated cost of such work to reclaim 120 hectares is as high as 6.6 million dollars or $55,000.00 per hectare with yearly maintenance costs adding to the total costs of flood and erosion protection.

The cost of these measures are so high compared to the benefits that can be derived that the proposal is not economically feasible. The Slocan River upstream of Lemon Creek was historically used for agriculture purposes, but with the rising water levels, wet land uses have emerged. The wet land activities result in land use allocation conflict with agriculture which must be addressed along with flood control measures.

Objectives

- To continue to protect land with a high agricultural capability.

- To encourage the development of a viable commercial agricultural industry.

- To encourage improved information programs for existing and potential producers.

- To review and correct the Agricultural Land Reserve boundaries.

Policies

1. Lands presently within the Agricultural Land Reserve shall continue to be protected by the Agricultural Land Reserve plan of the B.C. Agricultural Land Commission, except where individual appeals for exclusion from the A.L.R. program are successful or boundary revisions approved.

2. Agricultural use shall be encouraged for lands within the agricultural Land Reserve presently not being farmed. Intensification of agricultural development on private holdings will be encouraged and should occur prior to further Crown sale or lease arrangements for agricultural development.

Implementation

- The Ministry of Agriculture and Food shall outline viable crops and products for these areas.

- The Regional District of Central Kootenay, the Department of Agriculture and the Agricultural Land Commission shall meet to decide how the Agricultural Land Reserve can be revised and updated to specifically more accurately define agricultural land in the valley.

3. On land adjacent to the Agricultural Land Reserve, the Regional District and government agencies shall encourage development that will not create land use and development conflicts that can adversely affect the future viability of agricultural production within the A.L.R.

Implementation

- The Ministry of Agriculture and Food will be extensively involved with Regional District planning for lands adjacent to the Agricultural Land Reserve.

4. Appropriate agencies shall provide assistance programs to the agricultural community.

Implementation

- The Ministry of Agriculture and Food shall prepare and implement extension programs on developing viable crops and on marketing practices. These programs are to be held in the Valley on a regular basis.

- The Ministry of Universities, Science and Communications shall be asked to examine the feasiblity of establishing vocational courses related to intensive agriculture at the Selkirk College facilities.

5. The Ministry of Agriculture and Food, and the Regional District shall assist the agriculture community in developing and marketing viable opportunities based on the Economic Opportunities Study.

Implementation

- The creation of an alliance of the Valley farmers is to be encouraged.

- Where private sector interest is demonstrated, the Ministry of Agriculture and Food and the Regional District are to assist in preparing feasibility and marketing studies for new opportunities.

- Establishment of initial marketing systems such as farmers markets is to be reviewed.

- The Ministry of Forests will consider providing technical assistance in the establishment of a privately owned and operated seedling nursery. Proponents must have land, water and experience in nursery practice.

FISHERIES AND WILDLIFE

Statement

The Slocan Valley provides a variety of fishing opportunities in Slocan Lake, in at least 60 smaller lakes, in the Slocan River and in numerous streams and creeks. Varieties include; rainbow, cut-throat, Eastern brook, Kokanee, Dolly Varden, whitefish and burbot. Annual use in the Valley presently is 70,000 angler days with a total catch of 150,000 fish. The subregion has great potential and is under utilized. Fish and Wildlife Branch officials estimate the current supply is adequate to deal with an expected increase to 200,000 annual angler days within the next 20 years.

A diversity of habitat suitable for a wide range of animal species exists in the Valley. To date conflicts have occurred for some species related to settlement pattern, or, in more remote areas, due to resource uses. The Valley's wildlife provides hunting, trapping, viewing and photographic opportunities. Hunting is locally important for deer and waterfowl and is regionally significant for grizzly bear. The Valley does have the potential to be regionally important for mountain goat and woodland cariboo. A small number of local residents earn income from trapping fur bearing animals such as beaver, muskrat, mink, marten, squirrel and weasel.

A variety of waterfowl, especially mallards and Canada geese annually travel through the Valley. Marshes, ponds and slow water along the Slocan River provide shelter during migration season.

Fisheries, wildlife and waterfowl are significant resources due to economic, lifestyle and aesthetic considerations and need to be protected and enhanced.

Objectives

- Preserve and enhance significant habitat areas to ensure the continuation of a wide variety of wildlife and waterfowl species.

- Maintain, protect and where possible enhance habitat areas to ensure fish production at current levels.

- Provide a wide variety of opportunities to utilize the fish and wildlife resources of the Valley.

Policies

1. The Regional Distict, by settlement policies, and the Provincial government, by resource management policies, shall recognize the following high priority areas for the protection of wildlife winter range and waterfowl habitat.

South Slocan to Passmore	- lands up to the 200 year flood line and the east side of the Valley from present property lines to 1000 metres in elevation
Passmore to Slocan	- Perry Ridge up to 1000 metres and land below the 200 year flood line between Winlaw and Slocan
Slocan to New Denver	- generally lands below the highway
New Denver to the North of Lake	- lands below 800 m from New Denver to Rosebery; land north of Rosebery having a southern aspect to 1,000 m, otherwise land to 900 m, subject to further detailed settlement planning

Implementation

- Regional District of Central Kootenay land use controls, when implemented, shall recognize and protect significant wildlife values.

- Crown land alienation for residential, commercial or industrial development will consider wildlife values in these areas.

- The Ministries of Environment and Lands, Parks and Housing and Ministry of Forests shall develop motorized access regulations on Crown lands.

- The Fish and Wildlife Branch shall assess the need for increased enforcement in the Valley to protect fish and wildlife resources.

- Sport hunting opportunities will continue to be made available in the Valhalla Park area when animal numbers can sustain a harvest.

- Increased emphasis will be placed upon higher standards of waste management at refuse disposal sites and on private lands to minimize problems with bears and the Ministry of Environment will inform residents how to effectively reduce such problems.

- The Fish and Wildlife Branch will work together with Ducks Unlimited Canada and Valley residents to develop waterfowl habitat, including the Walter Clough Wildlife Management Area.

- The Fish and Wildlife Branch will work together with the Ministry of Forests and the forest industry to maintain the wildlife values, as well as timber values on forested lands.

- Subject to program planning needs and priorities, a long term management plan shall be developed for mountain cariboo herds in Wilson-Bremmer Creek and the Valhalla Park/TFL #3.

- It is recognized that highway death is a serious problem to deer populations in the Valley. Highway signs will be erected in areas of high annual kill rates, advising the driving public to slow down.

- It is recognized that doe licensing is a contentious issue in the Valley. A program of consultation between government agency personnel and wildlife groups will be undertaken to review this and other policies.

2. Fisheries management efforts will be directed to habitat protection and to stream and river management. Management will be directed at sustaining and/or enhancing wild trout populations to maintain sport fishing opportunities. On selected small lakes in the Valley, management will be directed towards planting of hatchery reared trout to provide sport fishing opportunities; provided that public access is guaranteed; other small lake fisheries will be managed to maintain their wild trout populations.

Implementation

- Increased efforts will be directed towards inventory, research, habitat protection and more intensive management of river and lake fisheries in the Valley.

- Regional District of Central Kootenay land use controls, when implemented, shall recognize and protect significant fisheries' values by encouraging adequate setbacks from water bodies and maintenance of vegetation cover adjacent to water bodies significant for spawning.

- Stream stocking will not be undertaken except to renew kokanee runs.

- The most important spawning streams in order of priority are Bonanza, Wilson, Carpenter, Silverton, Evans and Shannon Creeks.

- Water reserves will be placed on smaller creeks where required to ensure water is available for maintenance of fish populations.

3. Natural stream processes on the Slocan River create wet land areas, channel relocation and erosion problems that have positive and negative impacts on the fisheries and wildlife in this Valley. Proposals to influence natural stream processes will be adjudicated taking into consideration the impacts on the integrity of the Slocan River, effects on riparian landowners, impacts on the fisheries and wildlife resources and benefits for the public good.

TOURISM AND RECREATION

Statement

Slocan Valley's most significant tourism and recreation assets are the scenic resources, the quiet rural setting, the wildland recreation activities, the heritage values and the cultural features. Possessing several unique qualities compared to other north-south valleys in southeastern British Columbia, the area's scenic characteristics range from the pastoral setting of the river section to the lake to alpine views in the lake section. The natural scenic quality provides wilderness mountaineering, skiing, backpacking and lake oriented opportunities. The Valley has an interesting and diverse heritage that reflects prehistoric Indian culture, the turn-of-the-century mining boom, Doukhobor settlement and the Japanese internment during World War II.

To date the tourism/recreation industry has not played a major role in the Slocan Valley economy. Present tourists use levels are fairly low with an estimated 1980 volume of 55,000 traveller parties. A relatively small number of residents earn their livelihood directly from this sector. Developed only at a modest scale, existing tourist facilities include 100 roofed units, 115 camping units, 11 restaurants, three museums and an art gallery. The Valley's recreation facilities also are limited in range and suffer in quality from heavy use.

Due to the Valley's natural, heritage and cultural resources and their strong market appeal, tourism does offer good possibilities to diversify the local economic base, to generate additional income and to create new employment opportunities. This strategy's intent is to encourage the preservation and development of key resources, to encourage the development of new facilities and services, and to establish a marketing framework.

In preparation of policies on both tourism and settlement, it has been noted there exists strong local desire for future developments to be compatible with concerns, needs and aspirations of the local community.

The Kootenay Boundary Tourism Strategy prepared under the TIDSA program presents the context for tourism development applicable to the Slocan Valley:

> "In recognition of the capability and tolerance of the high quality natural, human and historic resources of the region, a conserver oriented strategy will be pursued to ensure the retention of resource quality in order to maintain options for future tourism development. Proposed short and medium term developments are of a modest scale, largely catering to resident needs and will include the expansion of water-based recreational and touring opportunities on the two major lakes, the marketing of a variety of packaged, mass-mode loop tours, the display and interpretation of historic elements especially ghost towns and the architectural heritage. Opportunities for a variety of

extensive outdoor recreation activities will be provided throughout the region, especially in the backcountry mountain areas such as the Valhalla Range along with rustic lodges on Slocan Lake". (p. 80)

Provincial Parks within the Valley preserve significant representative landscapes and provide a range of recreation opportunities. Kokanee Glacier Park, Valhalla Park and Rosebery Park, the lakes and river, along with a network of Ministry of Forests recreation sites and trails provide a diversity of outdoor recreation opportunities.

PARKS AND OUTDOOR RECREATION

Objectives

- To provide for a comprehensive range of recreational opportunities for local citizens and visiting tourists based on the exceptional natural and heritage features of the Valley.

- To improve public knowledge of the natural history, the recreation opportunities and the cultural themes both within the Provincial park system and on Crown lands in the Slocan Valley.

- To stimulate interest in the growth of quality tourism development within the Slocan Valley based on natural and heritage themes.

Policies

1. The Ministry of Lands, Parks and Housing, Parks Division shall prepare a park and outdoor recreation systems plan that provides for increased boating, camping and day use facilities. The following outdoor recreation framework for the Slocan Valley is to be adopted dealing with key recreational resources:

1.	The Valhalla Park	- conservation, recreation and tourism objectives (based on the land allocation decision), including hiking trails and destination campground sites consistent with park objectives and master plan.
2.	New Denver/Nakusp Railway Corridor	- consider recreation and tourism objectives, if the railway ceases to function.
3.	Zincton to Cody Railway Corridor	- hiking and cross-country skiing trail.
4.	Wragge Creek Beach or Valhalla Resort Site	- destination campground.
5.	Rosebery Beach	- day use facilities.
6.	Lemon Creek	- river corridor access.
7.	Vallican Archaelogical Site	- river corridor access and heritage site.
8.	Pedro Creek	- hiking and campground sites.
9.	Kokanee Park	- destination campground.

2. The Ministry of Lands, Parks and Housing shall prepare a master plan for development within the Class A Valhalla Provincial Park, and this master plan will provide for a range of types and intensities of use consistent with objectives for the park and the features which it contains.

   Implementation

   - The master plan will be developed in consultation with affected agencies and interested public groups.

   - The master plan for the Valhalla Provincial Park will be accompanied by a strategy for phased development of park and recreation uses through time, as budgets permit.

   - Where access to the park must occur across private land, legal right of access will be negotiated.

3. All agencies providing recreational facilities shall co-ordinate planning, development and management activities with each other and in the private sector to ensure the optimum use of resources and to provide a wide range of recreation opportunities.

4. The Provincial Parks and Outdoor Recreation Division, Ministry of Forests, Ministry of Transportation and Highways and the Regional District shall work jointly to develop a system of parks and recreation opportunities, including corridors and sites which have been identified to date (Map No. 6).

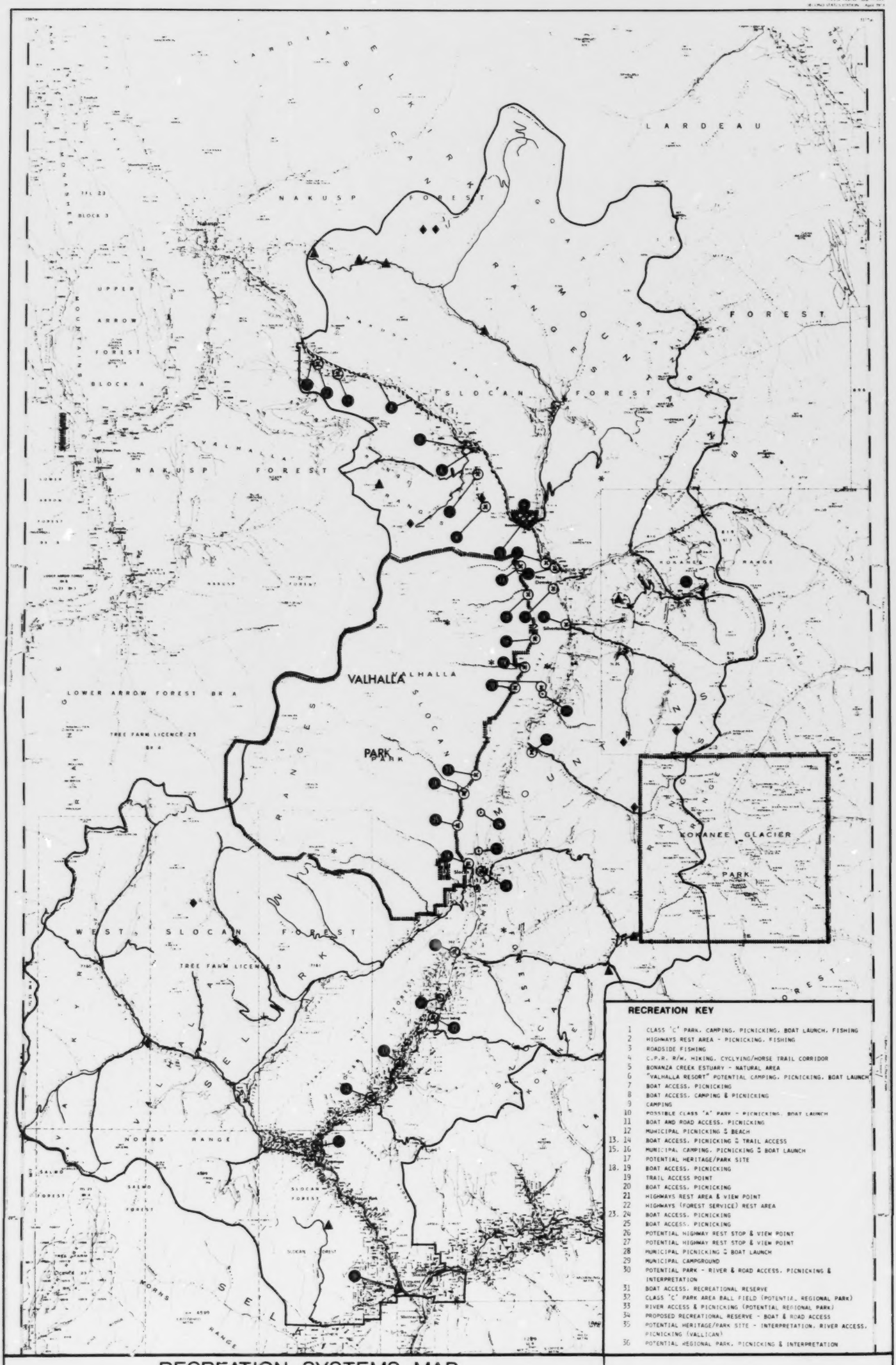
   Implementation

   - Appropriate Provincial government agencies and the Regional District shall prepare a joint recreation and heritage circle tour plan between the Slocan Valley and Kootenay Lake.

   - The Parks and Outdoor Recreation Division and the Regional District shall develop a plan for complementary park sites oriented along the Slocan River/highway corridor.

5. The Parks and Outdoor Recreation Division will maintain quality recreation and historical interpretation opportunities in Kokanee Glacier Park.

6. Appropriate agencies shall explore the feasibility of public acquisition and/or private development of high priority lake oriented recreation sites in the context of a park and outdoor recreation systems plan.


NTS MAP 82 K/SW
LARDEAU
NAKUSP FOREST
UPPER ARROW FOREST
BLOCK A
BLOCK 3
TFL 23
SLOCAN FOREST
VALHALLA
NAKUSP FOREST
LOWER ARROW FOREST BK A
TREE FARM LICENCE 23
BK A
VALHALLA PARK
SELKIRK RANGES
SLOCAN RANGES
MONASHEE MOUNTAINS
KOMONEE GLACIER PARK
WEST SLOCAN FOREST
TREE FARM LICENCE 8
NORNS RANGE
SALMO FOREST
SLOCAN FOREST
SLOCAN LAKE
SLOCAN RIVER
KOOTENAY LAKE
SELKIRK MOUNTAINS
RECREATION KEY
1 CLASS 'C' PARK, CAMPING, PICNICKING, BOAT LAUNCH, FISHING
2 HIGHWAYS REST AREA - PICNICKING, FISHING
3 ROADSIDE FISHING
4 C.P.R. R/W, HIKING, CYCLYING/HORSE TRAIL CORRIDOR
5 BONANZA CREEK ESTUARY - NATURAL AREA
6 "VALHALLA RESORT" POTENTIAL CAMPING, PICNICKING, BOAT LAUNCH
7 BOAT ACCESS, PICNICKING
8 BOAT ACCESS, CAMPING & PICNICKING
9 CAMPING
10 POSSIBLE CLASS 'A' PARK - PICNICKING, BOAT LAUNCH
11 BOAT AND ROAD ACCESS, PICNICKING
12 MUNICIPAL PICNICKING & BEACH
13, 14 BOAT ACCESS, PICNICKING & TRAIL ACCESS
15, 16 MUNICIPAL CAMPING, PICNICKING & BOAT LAUNCH
17 POTENTIAL HERITAGE/PARK SITE
18, 19 BOAT ACCESS, PICNICKING
19 TRAIL ACCESS POINT
20 BOAT ACCESS, PICNICKING
21 HIGHWAYS REST AREA & VIEW POINT
22 HIGHWAYS (FOREST SERVICE) REST AREA
23, 24 BOAT ACCESS, PICNICKING
25 BOAT ACCESS, PICNICKING
26 POTENTIAL HIGHWAY REST STOP & VIEW POINT
27 POTENTIAL HIGHWAY REST STOP & VIEW POINT
28 MUNICIPAL PICNICKING & BOAT LAUNCH
29 MUNICIPAL CAMPGROUND
30 POTENTIAL PARK - RIVER & ROAD ACCESS, PICNICKING & INTERPRETATION
31 BOAT ACCESS, RECREATIONAL RESERVE
32 CLASS 'C' PARK AREA BALL FIELD (POTENTIAL REGIONAL PARK)
33 RIVER ACCESS & PICNICKING (POTENTIAL REGIONAL PARK)
34 PROPOSED RECREATIONAL RESERVE - BOAT & ROAD ACCESS
35 POTENTIAL HERITAGE/PARK SITE - INTERPRETATION, RIVER ACCESS, PICNICKING (VALLICAN)
36 POTENTIAL REGIONAL PARK, PICNICKING & INTERPRETATION

RECREATION SYSTEMS MAP

LEGEND

Area H Boundary

Recreation Activity Areas

- Crown Land
- Private Land
- Recreation Features
- Existing Parks Sites and Trails
- Provincial Park Boundary
- Existing Forestry Sites and Trails
- Proposed Forestry Sites and Trails
- Primary Recreational Roads
- Points of Interest

DATE:

PREPARED BY REGIONAL DISTRICT OF CENTRAL KOOTENAY PLANNING DEPARTMENT

SLOCAN VALLEY PLANNING PROGRAM

SCALE

MAP 6

Implementation

- The Parks and Outdoor Recreation Division and the Regional District shall examine public acquisition and/or private development of the Valhalla Resort, the C.P.R. site in Rosebery, and the C.P.R. right-of-way from New Denver to Nakusp for public recreational purposes.

7. Appropriate recreation opportunities and facilities shall be provided by the Ministry of Forests on Provincial Forest lands off the main travel corridor.

Implementation

- The Ministry of Forests is to develop increased boating opportunities on Little Slocan Lake.

- The Ministry of Forests will maintain access to recreation sites.

8. Appropriate government agencies shall expand and upgrade visitor information systems on the natural history, recreational opportunities and cultural themes by use of signage, printed matter and interpretative programs.

Implementation

- The Highways Department and the Parks Division are to jointly develop information and directional signage that reflect a recreation and tourism theme.

- The Parks Division are to expand the self-guiding automobile brochure ("The Silvery Slocan") in conjunction with other government agencies to reflect the recreational and heritage resources.

- The viability of creating interpretative programs in the Slocan Valley is to be assessed.

- The Heritage Conservation Branch is to examine developing the Vallican site as a major interpretative centre.

9. The Regional District and Ministry of Lands, Parks and Housing shall undertake an assessment of the development potential for land located on the east site of the Slocan Lake. Crown and private land with high lake oriented recreation capability shall be encouraged to be developed by the private sector for recreation and tourism purposes.

Implementation

- Based on future settlement planning, a land use control bylaw should be considered by the Regional District of Central Kootenay to protect these lands and to ensure public access to the lake. Land use controls for the east side of Slocan Lake shall be consistent with policies developed jointly by the Ministry of Lands, Parks and Housing and the Regional District.

10. The Ministry of Lands, Parks and Housing shall, through the Slocan Recreation Systems Plan investigate the feasibility of designating the Slocan River as a Recreational Waterway according to the recommendation contained in the Kootenay Boundary Tourism Regional TIDSA Study of 1982, and establish management guidelines to protect the recreational and scenic resources for the river valley. Sites will be developed for public access to the river at key locations. At present, all Crown land islands in the Slocan River are designated as recreational reserves.

HERITAGE SITES

Objectives

- To preserve and interpret heritage and archaelogical sites which have significant historical, cultural and tourism values.

Policies

1. Identify and protect priority heritage sites through designation, acquisition and development, and other means where appropriate.

   Implementation

   - High priority sites are to be recommended for designation by the Lieutenant-Governor in Council.

   - Where site avoidance or preservation measures are not feasible, Heritage Conservation Branch will undertake salvage projects as feasible.

   - A stabilization and physical conservation program for pictographs in the Slocan Valley is to be undertaken by the Heritage Conservation Branch.

   - In conjunction with appropriate government agencies the Heritage Conservation Branch will contribute to a heritage/recreation circle route connecting the Slocan Valley with the Nelson/Kootenay Lake region.

   - Local initiatives toward heritage conservation in the Slocan Valley, including the municipalities of New Denver and Silverton, will be routed to the British Columbia Heritage Trust for consideration. Emphasis will be placed upon key buildings and sites freom native pre-historic settlement, the turn-of-the century Silvery Slocan mining era, Doukhobor settlement, the Japanese internment during World War II and other outstanding buildings and sites in the rural and backcountry areas of the Slocan Valley.

2. Develop a heritage interpretation program focussing on priority themes which include native settlement and mining heritage.

   Implementation

   - Based on the heritage/recreation circle plan the appropriate government agencies prepare a brochure highlighting the major heritage and recreational resources.

3. The Heritage Conservation Branch will actively pursue ways and means of acquiring the Vallican site. If acquired, the Provincial government will designate it as a Provincial Heritage site for preservation, ongoing study and interpretation.

4. Land use controls when enacted by the Regional District of Central Kootenay shall recognize and protect heritage values of local significance, such as the Archaeological Site at Vallican.

TOURISM DEVELOPMENT AND MARKETING

Objectives

- Encourage expansion of resource-based tourism to contribute to the diversification of the Valley economy.

- Establish and implement a marketing framework to attract an increased number of visitors into the area in all four seasons.

- Improve the economic opportunities for existing operators.

Policies

1. Government will provide for the development of the tourism resource theme through management strategies, settlement strategy, and the parks and outdoor recreation systems plan.

2. The Economic Development function of the Regional District, the Kootenay Boundary Visitors Association and other tourism promotion groups shall be encouraged to foster the expansion of tourism related developments to promote opportunities in the Valley, and to develop appropriate visitor packages.

Implementation

- Encourage the formation of an alliance of the Slocan Valley tourist operators to generate co-operation and to provide a united marketing approach in conjunction with the Kootenay Boundary Visitor Association.

- Support concerned marketing interests to design, co-ordinate and implement specific packages to key market areas.

- Develop a joint advertising program to penetrate the local regional, Western Canada and Pacific North West markets. The marketing image is to be matched by the availability of facilities, services and events.

- Encourage Slocan Valley tourist facility operators to prepare a group brochure and other promotional material.

- Local tourism-related businesses will be encouraged to utilize the Provincial government's hospitality training programs to instruct staff and management.

- Support the creation of new events such as craft fairs, celebrations, festivals and artistic productions.

- Investigate potential markets on an ongoing basis.

SETTLEMENT GUIDELINES

The public meetings that were part of this planning process rarely discussed settlement planning. Resource issues and economic issues dominated the public perception of the plan, as well as the interests of most government participants. For this reason, settlement planning is poorly understood by residents of the Valley even as the program comes to an end.

Some of the information vital to settlement planning is not yet available. For example, this plan commits the Ministry of Environment to the mapping of the floodplain in 1985, and commits the Forest Service to finalization of a road access plan. It also requests that the Regional District of Central Kootenay and the British Columbia Agricultural Land Commission undertake a boundary review of the Agricultural Land Reserve.

Until this information is complete it is not possible to have concrete discussions about settlement planning with the public. People understand the need for restrictions of development in the floodplain, for example, but until they know just where that floodplain is, resolution is impossible.

For these reasons, it is premature to adopt a settlement plan for Area 'H'.

This section will define terms and objectives to be used by government managers to evaluate development and subdivision proposals. No additional level of government regulation is implied or created by these guidelines. Zoning will take place if and when it is requested by individual communities in the Slocan Valley.

These guidelines apply particularly to the rural area. The municipalities will continue to be the centres of commercial activity. Any settlement planning on the borders of municipalities will involve the rural area and municipal participation.

SETTLEMENT ISSUES IDENTIFIED IN THE PLANNING PROCESS

The following are settlement concerns that need to be addressed at the present time. Most of them appear elsewhere in this document. They are repeated here in order to constitute a list of issues to be addressed by parties submitting or evaluating development proposals or subdivision applications.

1. FORESTRY

Private land must be crossed frequently to get access to Crown Forest land in many parts of the Valley. Conflicts are created when homes are built on land that has been used or will be used for logging access. Residents often complain about noise, dust or danger from log hauling. Loggers then object to being locked out of large areas by private ownership of logical road locations.

Potential conflicts can be reduced by redirecting residential subdivision from timberland access roads and proposed road locations. Where possible, roads that will be used in future should be posted as forest access routes in order to lessen future misunderstanding. Discussions need to occur at the community level to determine how best to ensure the accommodation of settlement and forestry uses to ensure continued economic stability.

2. WATER

The conflict between water use for settlement and forestry interests is most serious in areas where water supplies are inadequate or barely adequate to meet the demand. In such areas no reserve exists to cushion the effect of industrial use of the watershed.

Potential conflicts can be minimized by discouraging future subdivision in areas where surface water demand is close to, or equal to surface water supply. Subdivision should be encouraged in areas where water supplies are well in excess of demand.

3. WINTER RANGE

Deer use certain areas for wintering and fawning seasons. Subdivision in these areas brings dogs, as well as increased human activity which can destroy the area for deer.

Small lot subdivision in areas of high winter range capability for deer should consider wildlife values.

4. FLOODPLAIN

Difficulties arise for owners of properties near the river because various government agencies have different rules or guidelines for defining the floodplain. This should be resolved by the mapping of the floodplain in order to facilitate site specific evaluations.

5. MINING

Conflicts have arisen over access to mines through private land and over mining claims that coincide with residential use by different owners. Further subdivision of land in mineralized areas will be referred to the Ministry of Mines for comment. Higher quality aggregate gravel exists on both private and Crown land. As development of the Valley occurs, this resource will be important. To ensure continued economic supply, efforts need to be made to encourage small lot subdivision in areas where gravel is not as important a resource.

6. AGRICULTURE

Subdivision of land for residential use puts pressure on nearby farms. Subdivision should be discouraged inside the Agricultural Land Reserve and on its borders. On the other hand, A.L.R. boundaries are frequently not accurate. The A.L.R. boundaries and classification of land must be fine-tuned before subdivision suitability can be determined.

Crown land available for use inside the A.L.R. should be made available to existing or aspiring farmers rather than residential users.

Small lot rural residential development adjacent to agricultural areas contribute to the potential for conflict. Residents complain about noise, smell, etc., while farmers are concerned about crop destruction, domestic dog nuisances, etc. Discussions must occur to develop methods that will ensure that this conflict does not materialize in the Valley as agriculture develops.

7. COMMERCIAL USE

Home operated businesses are traditional in the Slocan Valley and should continue.

Strip development of Highway 6 is not to be encouraged. Commercial centres are naturally emerging at the junction of Highways 6 and 3A, at Slocan Park, at Winlaw and in the three villages, and should be encouraged.

8. INDUSTRIAL USE

Large industry needs to be protected from conflict with residential users. Areas should be identified and information made available to investors regarding possible industrial sites. Sites shall logically include areas where industrial services (power, water, transportation) are available and where noise, dust and other irritants will not offend the surrounding community. Surrounding land use should be compatible with the continued long-term viability of locating industries.

Small industries such as tie mills are traditional in the Valley and should remain so without being confined to major industrial locations.

9. RESIDENTIAL USE

The Regional District, together with Crown agencies, will identify and make public areas with adequate water and suitable soils, that can be serviced and made available for small lot residential use.

Houseboats on the Slocan River should be discouraged. The narrowness of the river, the conflicts with recreational boaters and wildlife, and the possible waste disposal problems make the idea unfeasible.

10. TOURISM

Where a developer seeks government assistance or land or waterfront for commercial activities, that request should be accompanied by a full development proposal. Investors in this industry are not likely to put large amounts of money into an area unless local and Provincial governments are in support of the venture and approve of the site.

The area from Rosebery to New Denver is suited for such investment and Crown land wil be made available for legitimate proposals. This does not preclude activity elsewhere in Area 'H' or the villages. To provide tourism investors with information, lands having tourism development potential should be identified by the Regional District.

Applications for Crown land and/or assistance or support in financing tourism and commercial waterfront related ventures should be accompanied by a full development proposal by the developer.

11. SOILS AND TERRAIN EVALUATION

Some soils in the Valley are well suited to septic use; others are poorly suited. Some areas experience terrain hazards such as slope instability, erosion, excessive stoniness, that increase development costs and decrease development desirability. Some communities have already experienced problems with septic systems or well water/septic conflicts.

The Regional District of Central Kootenay will begin a soils and terrain evaluation of the various communities in the Valley to determine development suitability. This information will be valuable to government approval agencies, the public and developers.

12. FISHERIES

Many of the small creeks feeding the Slocan River serve as nursery creeks for fish. Water reserves for fish will be placed on these creeks and subdivision will be encouraged only where available water for both people and fish can be shown.

To ensure minimum sediment loads in spawning areas, development on adjacent lands should be adequately set back and efforts to maintain natural vegetation in key areas need to be considered.

The previous twelve points are settlement guidelines only. They are not a settlement plan or are they zoning.

ZONING

When landowners wish to define the use of their area in order to protect residential or rural communities, they will do so by requesting a zoning by-law.

The concept of "non-conforming use" will not be used in zoning by-laws. All uses of land current when and if zoning takes place in a community will be deemed acceptable. Thus, if a community wishes to define what activity is desired in their area, they must do so before a conflict arises.

Prior to any zoning by-laws, two things have to happen. First, the Regional District will do an in-depth Settlement Plan for individual communities. The Settlement Plan will determine soil capabilities for sewage disposal, the availability of water, and the suitability of the land for various uses. Second, the community involved must ask for zoning. Zoning by-laws would be required to legally define appropriate lot sizes and land uses for any area.

As these guidelines do not constitute zoning, no lot sizes are proposed at this time.

The Regional District received many suggestions for government services related to settlement during the planning process. Of those, the most viable at this time appears to be the creation of a volunteer fire department for the southern valley. This project will constitute the first priority for Regional District of Central Kootenay activities related to settlement in Area 'H'.

SLOCAN VALLEY MAJOR ROAD NETWORK PLAN

Statement

The aim of the road network plan is to facilitate the movement of people and goods within and through the Slocan Valley in a manner that is cost effective and efficient, while endeavoring to maintain and improve the environment of existing and future settlements (Map No. 7).

The number of future transportation options are restricted by topography, the existing network configuration and by present and anticipated land use.

The planning perspective is very long range and is not keyed to a target year or population level.

Endorsement of the plan by all appropriate municipal, regional and Provincial agencies is essential in order to achieve consistency between land use and transportation decisions.

Objectives

- To develop and maintain a safe and efficient public highway system.

Policies

1. The Ministry of Transportation and Highways shall undertake improvements to the bridge system, as outlined by the plan, with the following priorities for improvement:

High Priority	- Winlaw - Vallican - Passmore
Medium Priority	- Perry Siding
Low Priority	- Tri Pac - Slocan Park

2. The Ministry of Transportation and Highways shall continue to undertake improvements to Highway No. 6 to a Provincial Trunk highway standard. Improvements at Cape Horn shall, where physically and economically possible, include provision of viewpoints for the travelling public.

3. Upgrading of the Back Road shall continue to be undertaken by the Ministry of Transportation and Highways in consultation with local residents.

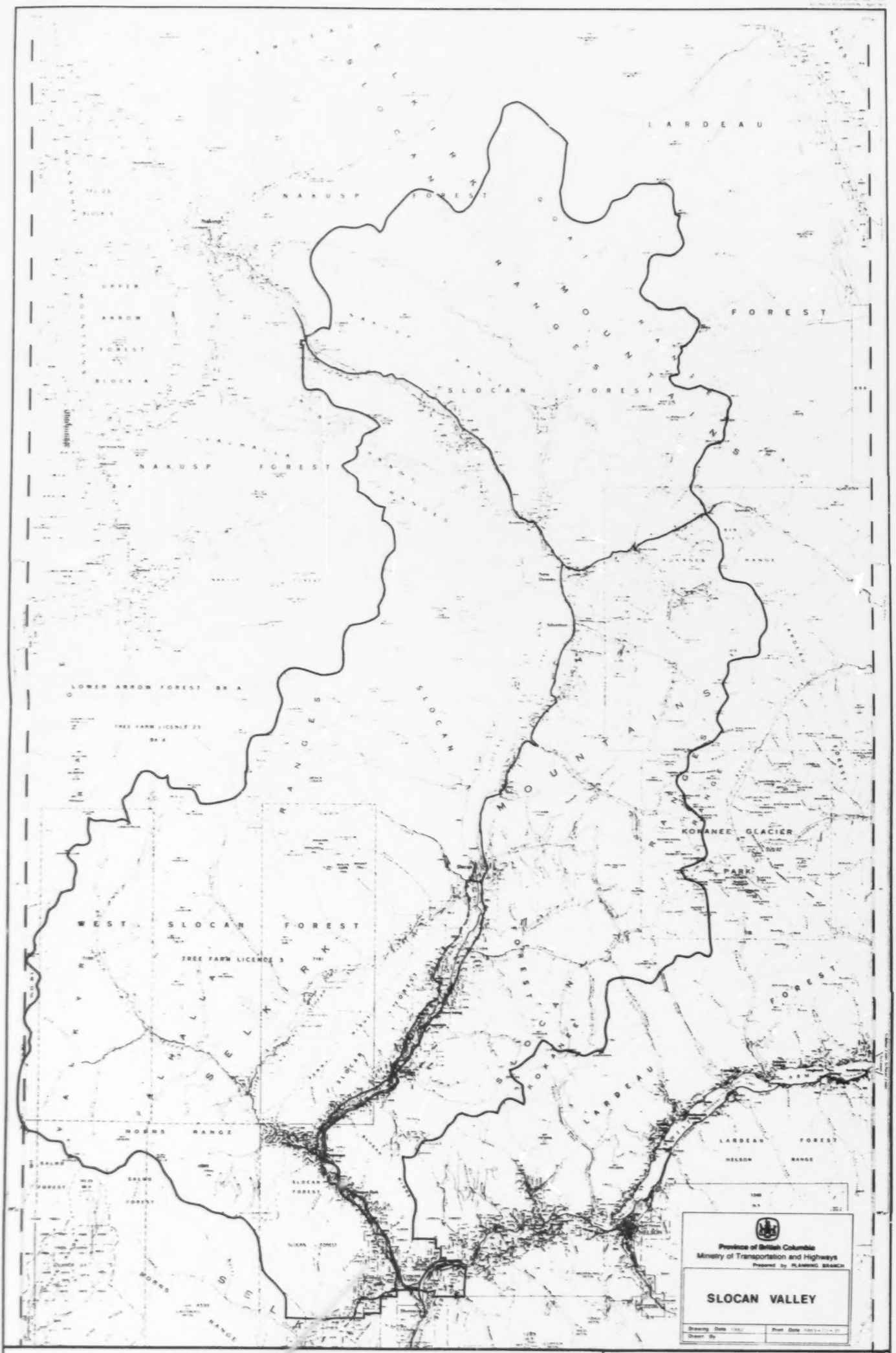
4. Continuity of the back road shall be established as part of the Network Plan to ensure that right-of-way options are maintained to service long term potential future growth.

Implementation

- Subject to its overall Provincial road improvement program, the Ministry of Transportation and Highways shall appropriately budget for the replacement or improvement of the priority bridges. Although the Ministry does agree to the priority for bridge replacement outlined, the actual order in which the bridge construction program will be implemented may be modified for economic reasons or because of unforeseeable circumstances at the site.

- Right-of-way options required for continuity of the back road shall be recognized by settlement planning and controls for the land area affected and shall be considered by the Approving Officer at the time subdivision application evaluations are undertaken.

- Due to there being no suitable location for reconstruction of the Vallican Bridge, the Vallican Span will be eliminated and replaced by a structure across the Little Slocan River, with a connection to Highway No. 3 via the Passmore Bridge. The third Taghum truss will be moved to the Little Slocan site for erection under a future contract.



MAJOR ROAD NETWORK

LEGEND

- Area H Boundary
- Proposed Road
- Existing Road

DATE:

SLOCAN VALLEY PLANNING PROGRAM

MAP 7

PUBLIC INVOLVEMENT

Statement

One of the implications of adopting the Slocan Valley Development Guidelines is the need for careful management and in some cases more intensive planning for both resource management and settlement, particularly in the Valley bottom. More site specific decisions will be made within the policy framework and intent of the guidelines. These decisions will have additional impacts on the residents, visitors, industry and business, and the regional and Provincial interest. Although the ultimate decisions lie with governments, communication with local residents, the business and industry community, and landowners will help to lead to decisions that are based on the broadest available set of information and views that reflect all concerns leading to community support. It is in this spirit that an objective and policy for public involvement is included within the plan.

Objective

- Provide a variety of opportunities for the public to constructively contribute to management processes and decisions.

Policies

1. Provincial agencies and local government shall, through their more intensive planning prgrams, incorporate a public involvement component.

2. When considering the public involvement component of intensive planning programs, all possible means of effectively involving the public shall be considered.

Implementation

- Provincial ministries and local government, upon establishng terms of reference for intensive planning programs, shall as part of those programs provide fcr public involvement.

GENERAL JOINT POLICY ON IMPLEMENTATION

Policies contained within this document are accompanied by implementation measures. Implementation will be critical to the success of the Slocan Valley Development Guidelines. All parties will work to develop trust and confidence and to resolve any issues through compromise and consensus rather than by confrontation. The following approach will be followed in implementation.

1. Implementation Responsibility

The planning and management programs of the Regional District and Provincial government will proceed consistent with the policies contained in these guidelines. Primary responsibility for implementation of plan policies rests with the agencies which have legislated responsibilities. No new management agencies or new levels of government are created or required, but rather policies are implemented entirely by existing agencies, within their respective management jurisdictions. Consultation with other agencies and the public will be consistent with procedures contained in this document and with the agency's established internal procedure.

2. Communication

The primary responsibility for consultation in routine management programs, rests with the agencies which have legislated responsibility. Communication regarding implementation need not be formalized and may be in the form of verbal or written notification, circulated minutes or correspondence, or an invitation to send an observer or participant to attend meetings when pertinent items are to be discussed. In cases where any of Regional Board members, Regional District staff, an Advisory Planning Commission representative or Provincial agency staff are asked to attend each others meetings to discuss aspects of policy implementation, this attendance will be solely for the purposes of sharing information and resolving potential problems.

3. Annual Plan Review

Communications and monitoring will be facilitated by holding a joint (Provincial/Regional District) public meeting once a year to advise the public of progress and any problems with the guidelines. This meeting will be held in Electoral Area 'H', hosted by the Regional District, and will be held alternately in the north and south areas. The Regional District of Central Kootenay Planning Department staff will assist the Regional Board members with the preparation of a summary report on the status of plan implemenation and an agenda for the public meeting. Provincial staff may assist. Provincial ministries shall contribute data as requested by the Regional District for an annual summary report on plan implementation.

4. Plan Amendment

When plan amendments become necessary due to changing circumstances or a desired change in policy, these shall be made in the following manner:

- If a Provincial agency or the Regional District of Central Kootenay wishes to amend the guidelines, they shall notify other affected parties with the proposed amendment and the reasons for the change and provide opportunities for comment.

- Following comment and agreement, the guidelines may be amended in the following manner:

  a. The Regional Board will, by resolution, amend its previous authority which adopted the Development Guidelines.

  b. Provincial agencies will confirm, in writing, their agreement with the amendment. In the case of matters of interpretation or refinement which are within the normal managment purview of regional directors, the amendment may be signed by the regional directors of the affected agencies. In the case of matters requiring senior level Provincial approval the amendment may be signed by the deputy ministers or ministers of the affected agencies or by the Chairman of the Environment and Land Use Committee as is appropriate to the nature of the amendment. Where one or more parties are opposed to the proposed amendment then the directly affected parties shall meet to resolve differences.

  c. The Regional District of Central Kootenay Planning Department will retain the master copy of the guidelines and any future revisions and will notify affected parties of any proposed or approved revisions as may be necessary from time to time.

5. Conflict Resolution

  a. When an issue arises an affected party or complainant will document what the issue is, where and when it is occurring, and the anticipated consequences. The complainant will provide the most directly responsible agency (Regional District or Provincial Ministry) with the documentation. The directly affected agency will take action to resolve the issue directly with the complainant. Prompt resolution of the issue will occur within 30 working days.

     Where necessary, Provincial agencies may utilize existing legislative and management authority to prevent damage from occurring during the time that the conflict is being resolved.

b. In unusual circumstances where the issue cannot be resolved in this manner, it may be appropriate to use the conflict resolution mechanism as described below. Parties to resolving the conflict will be:

- The Regional Board (responsibility will be delegated to the Elected Representatives Committee);
- Regional District of Central Kootenay Staff;
- Senior staff of directly responsible Provincial Ministries.

This Committee will be chaired by a person acceptable to all committee members. The Committee membership will vary according to the type of issue and agencies' respective responsibilities for its resolution. Depending upon the issue, it may not be necessary for Provincial ministries to be involved or for the Regional District to be involved. For example, on an issue of strictly inter-Ministry concern, the Regional District would not be involved unless the Ministries requested their assistance.

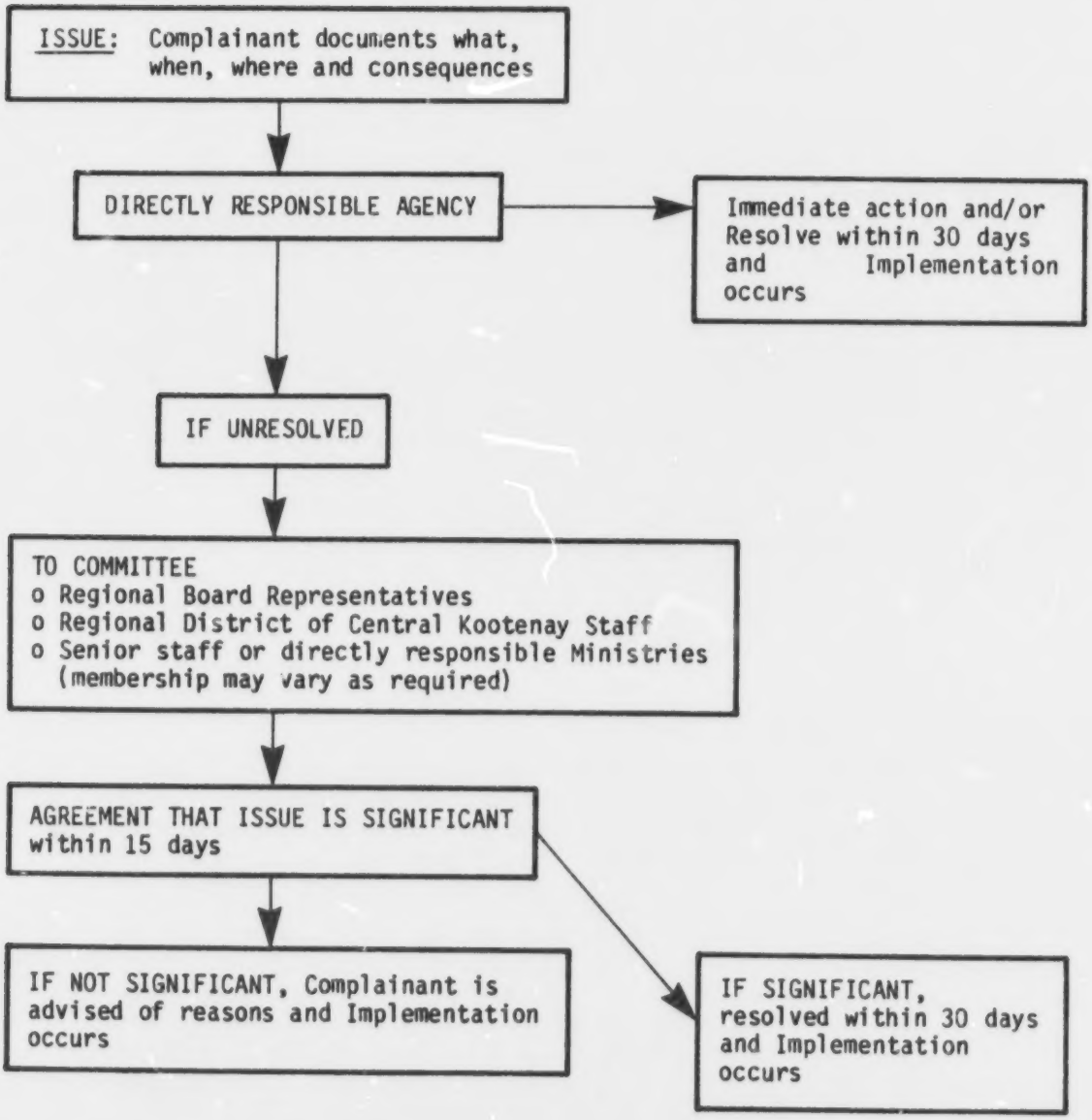
In their approach to resolving the conflict, these parties will first determine whether the issue is significant. Significance will be determined in relation to policies in the guidelines and severity of or extent of possible adverse consequences. Significance will be determined within 15 working days. If the issue is not significant, the complainant will be advised of the reasons for this determination. If the issue is significant, it will be resolved by this group within 30 working days.

When an issue is placed into this conflict resolution mechanism, no party to its resolution will discuss it with the media during deliberations, and the deliberations will not be discussed with the general public or interest groups except for the purpose of clarifying information. This approach is intended to facilitate constructive resolution of the issue among the parties.

c. This conflict resolution mechanism in no way supersedes any legislation or management authority of Provincial agencies or the Regional District. This mechanism will be in effect for five years. On any confict, if either the Regional District of Central Kootenay or the Province elects not to participate, silence shall be interpreted as agreement. After five years a review of the process shall be undertaken and continuation or modification will be discussed.

FLOW CHART

CONFLICT RESOLUTION MECHANISM


ISSUE: Complainant documents what, when, where and consequences
DIRECTLY RESPONSIBLE AGENCY
Immediate action and/or Resolve within 30 days and Implementation occurs
IF UNRESOLVED
TO COMMITTEE
o Regional Board Representatives
o Regional District of Central Kootenay Staff
o Senior staff or directly responsible Ministries (membership may vary as required)
AGREEMENT THAT ISSUE IS SIGNIFICANT within 15 days
IF NOT SIGNIFICANT, Complainant is advised of reasons and Implementation occurs
IF SIGNIFICANT, resolved within 30 days and Implementation occurs

6. Summary

The intent of this approach to implementation and conflict resolution is to leave management and implementation of policies with the directly responsible agency, while providing a flexible mechanism whereby the most appropriate persons or agencies may come together to resolve specific issues as these arise.

DEFINITIONS FOR TERMS USED IN THE SLOCAN VALLEY DEVELOPMENT GUIDELINES

Agricultural Land Reserve (A.L.R.

Land that is suitable for farm use as agricultural land is designated as an Agricultural Land Reserve and subject to the B.C. Agricultural Land Commision Act and regulations.

Alluvial Fans

Soil material (clay or gravel) deposited by running water.

Ambient Water Quality Standard

Maximum or minimum physical, chemical or biological characteristic of water, biota or sediment which will protect the most sensitive designated water use of a specific location with an adequate degree of safety taking local circumstances into account.

Ambient Air Quality Objective

Ambient air objectives for British Columbia are currently given in the Pollution Control Objectives for various industries in the Province. The method of presenting the objectives varies from one industry to another with a range or several levels being specified for chemical or physical constituents of ambient air. The least stringent level provides adequate short term protection against adverse affects on personal health and comfort, animals, vegetation, soil, water materials and visibility. The most stringent level will provide adequate long term protection. (The method of establishing ambient air objectives for British Columbia is presently under review. In the future objectives may be set on a site specific basis taking into consideration Provincial criteria levels.)

Allowable Annual Cut (AAC)

The rate of timber harvesing specified for a Timber Supply Area or Tree Farm Licence.

Basic Forestry

Maintaining the productivity of forest sites, restocking of denuded forest lands with commercial tree species within a specified period of time according to site factors and protection against damage by fire, insects and diseases to predetermined standards.

Bio-Physical Inventory

An inventory of resources including water, soils, landform, wildlife, vegetation and climatic information.

Clustering of Development

A land use development scheme in which structures are arranged closer together in certain areas in order to preserve natural features or open space in others.

Compatible

Capable of existing together.

Community Plan

An expression of policy for any use of land, including surfaces of water, or the pattern of the subdivision of land and either or both apply to any or all areas of a municipality.

Community Water System

A system or waterworks which serves two or more parcels and which is owned, operated, and maintaned by an Improvement District, a municipality, the Regional District, or which is regulated under the Water Utility Act and which is approved by the Ministry of Health.

Community Sewer System

A common sewer, or system of sewerage or sewage disposal, which serves two or more lots and is approved under the Health Act or the Pollution Control Act.

Compendium

A brief summary of a field of knowledge.

Consumptive Use Watershed

A drainage basin which has one or more licenses issued under the Water Act for domestic, waterworks, irrigation or industrial purposes.

Control Points

Natural features of the landscape which are the key reference points for designing logging operations and transportation systems (ie. creek crossings, landings, etc.)

Decision-Making

A process of collecting and evaluating information, assessing the quality of the information, assessing alternatives relative to objectives and making judgements on actions to accomplish objectives. Decision-making may be preceded by varying degrees of consultation, but ultimately is a responsibility which is vested by statue with the decision-makers.

Forest Management Standard

Criteria established by the Ministry of Forests used to evaluate field operations.

Forest Tenures

Methods of agreement which grant the right to harvest Crown timber, including; forest license, timber sale license, timber license, tree farm license, pulpwood agreement, woodlot license, free use permit, license to cut, road permit and Christmas tree permit.

Generalized Access Plan

A plan encompassing the Slocan Valley which describes general access corridors which exist or are expected to be required for forest management purposes over the next 20 years.

Incremental: by a series of regular consecutive additions or increases.

Implementation

To ensure fulfillment by specific measures.

Inoperable Forests

Forest areas of which only 10 percent is expected to be technically or economically possible to harvest over the next 20 year period.

Integrated Planning Process

A deliberate and careful process of planning various resource uses to interfere with each other as little as possible and to complement each other as much as possible to achieve the optimum social and economic benefit to the people of the local area and British Columbia.

Intensive Agriculture

The growing, rearing, producing and harvesting of agricultural products, the rearing of livestock, including; feedlots, mink farms, mushroom farms, poultry farms and pig farms.

Intensive Forestry

Any silvicultural practice beyond the "basic forestry" level which results in enhanced forest growth. Includes such practices as thinning and fertilizing.

Land Use Control By-Law (Zoning)

A local government law approved in accordance with the B. C. Municipal Act dividing an area into zones and regulating, among other items, the use of land, buildings and structures, the size, shape and siting of buildings and the provisions of parking and loading spaces.

Landscape Management

The assessment evaluation, design and manipulation of a landscape (See Appendix 5).

Licensed Watershed

A land area (normally the natural drainage of a watercouse), which is licensed as a domestic or irrigation water supply.

Logging Systems

The method of logging and type of equipment used, keeping in mind the stand characteristics, terrain and requirements for environmental protection.

Not Satisfactorily Restocked (NSR)

An area that has been disturbed by fire, logging, etc., and has not been restocked in an acceptable level with commercial tree species.

Old Growth Timber

Timber which is beyond its peak growing period. Depending upon how far beyond its peak growth, it may also be referred to as "mature", "overmature", or "decadent".

Operable Forest

Forest areas which are expected to be technically and economically possible to harvest over the next 20 year period.

Operational Activities

Detailed management activities.

Performance Standards

Criteria agreed upon by the parties involved and used to guide field operations for specified results (ie. watershed protection, road maintenance, etc.). Usually laid down specifically in written contracts and administered by the responsible government agency.

Planning Levels: (1" = 2 miles or 1 cm = 1.25 km)

Strategic	- A regional level of planning dealing with a scale of 1:250,000; 1:100,000; or larger.
Landscape	- A valley or valley sub-unit level of plan with a scale of 1:50,000; 1:20,000 or larger.
Operational	- A local level of planning with a scale that could be as small as 1:20,000, but is usually 1:10,000; 1:5,000; or larger.

Landscape and operational levels are used in Appendix 4 in describing a process for resolving watershed protection/forest harvesting conflicts.

Presentation Scale

Refers to the scale of maps used to visually present information which is often at different scales due to differing levels of survey intensity.

Problem Forest Types

Those forest areas which are presently seen to be difficult to manage silviculturally or economically because of on-site factors or market factors.

Process

A series of actions logically leading to a conclusion.

Riparian

Coastal, or of the bank of stream or lake.

Risk Analysis

An assessment of the likelihood and magnitude of possible or probable consequences or losses that might occur as a result of a natural process (natural risk) or through human activity (management induced risk).

Rural Industrial Use

Trade or manufacture of products at locations outside of incorporated communities.

Settlement Plan

A comprehensive land use plan establishing land use policies for areas of a Regional District which are unincorporated.

Silvicultural Prescriptions

Those methods of treating a forest site which are dictated by ecological factors of the site. Examples of prescriptions would include such things as the type and number of trees to be planted, when planting should take place, type of site preparation to be done, methods of logging, etc.

Silvicultural Systems

A silvicultural system is the process by which forest crops are tended, removed and replaced by new crops.

Smoke Ventilation Indices

Ratings which combine the mixing height with the average wind speed to produce a number which relates to the potential of the atmosphere to disperse pollutants. The index is scaled from 0-100 and divided into classes from poor to excellent. (Mixing height is the maximum depth of the atmosphere that is overturned and mixed during the day due to natural heating).

Soil Disturbance

Soil buried or gouged (depth specific to particular soil type and terrain). In forest harvesting primarily associated with roads, skid trails and landings.

Strategic Planning

A sub-regional level of long term planning with a scale of 1:250,000 or larger which establishes quantified resource management objectives for each resource planning program for five years based on an analysis of present and potential demand and supply of environmental resources.

Stream

Includes a natural watercourse or source of water supply, whether usually containing water or not, ground water, and a lake, river, creek, spring, ravine, swamp and gulch.

Supply Block

A portion of Timber Supply Area with similar transportation routes, forest characteristics and harvesting systems. Used to determine the location and amount of available timber in the short term (20 years).

Survey Intensity Level

Refers to a specific intensity of field observation of on the ground features. Increasing survey intensity means increasing detail of information.

Timber Supply Area (TSA)

An area identified by the Ministry of Forests for the purposes of analyzing, planning and managing the forest resources. Boundaries have been established considering geography, present and expected population centres, transportation network, manufacturing facilities, and the forest resources themselves.

Water Demand

Is the total licensed amount of water from a stream for domestic, irrigation, waterworks, mineral trading, mining, industrial, power, hydraulicking, storage, conservation, fluming, conveying and land improvement purposes.

Water Delivery System

Anything capable of diverting, storing, measuring, conserving, conveying, retarding, or using water as provided for in the Water Act.

Water License

License issued under the Water Act which authorizes the construction of works or the diversion and use of surface water from a designated source to a stated quantity on a specified parcel of land for a specified purpose.

Water Management Standard

Criteria established by the Water Management Branch of the Ministry of Environment used to evaluate field operations.

Water Resource

Discussion of the water resource refers to the quality of water and timing of flows in a watershed.

Watershed

A drainage basin that collects and discharges its surface streamflow through one outlet or mouth.

Watershed Management

The management of the natural resources of a drainage basin primarily for the production and protection of water supplies and water-based resources, including the control of erosion and floods, and the protection of aesthetic values associated with water.

Woodlot

A form of forest tenure which covers private land managed for forest production in conjunction with parcels of Crown land of less than 400 ha. A woodlot license is issued for 15 years with a performance review and renewal option every five years. The woodlot license includes requirements for Annual Allowable Cut (AAC), management and working plans, cutting permits, utilization standards, stumpage charged on the Crown land portion, license transfer and annual reports.

APPENDIX 1

PLANNING PROGRAM PARTICIPANTS

Regional District of Central Kootenay

Slocan Elected Representatives

Corky Evans
Electoral Area "H" Representative

Dave Barclay
Village of Slocan Representative

Bill Finley/Mabel McCrory/H. Laktin/S. Hashimoto
Village of New Denver Representative

Sam Ott/John Anderson
Village of Silverton Representative

Province of British Columbia

Environment and Land Use Committee (Cabinet Ministers)

Environment and Land Use Technical Committee (Deputy Ministers)

Kootenay Resource Management Committee (Regional Directors) of the following Ministries:

- Ministry of Agriculture and Food
- Ministry of Energy, Mines and Petroleum Resources
- Ministry of Environment
- Ministry of Forests
- Ministry of Industry and Small Business Development
- Ministry of Lands, Parks and Housing
- Ministry of Municipal Affairs
- Ministry of Transportation and Highways

Planning Program Coordinators

Bruce Heayn
Coordinator and Socio-Economic Work Group Chairman
Ministry of Municipal Affairs

Ray Travers
Resource Sector Work Group Chairman
Ministry of Environment

Floyd Dykeman
Planning Director
Regional District of Central Kootenay

Community Involvement Assistant

Rory Lindsay

Resource Sector Work Group

This work group is comprised primarily of resource management staff based in the region, representing:

Ministry of Environment
- Terrestrial Studies Branch (Chairman)
- Water Management Branch
- Waste Management Branch
- Fish and Wildlife Branch

Ministry of Forests

Ministry of Energy, Mines and Petroleum Resources

Ministry of Agriculture and Foods

Ministry of Lands, Parks and Housing
- Parks and Outdoor Recretion Division
- Lands and Housing Division

Ministry of Provincial Secretary
- Heritage Conservation Branch

Regional District of Central Kootenay
- Planning Department
- Economic Development Commissioner

Ministry of Health
- Selkirk Health Unit

Socio-Economic Work Group

This work group is comprised primarily of research and economist staff based in Victoria, representing:

- Ministry of Municipal Affairs (Chairman)
- Ministry of Energy, Mines and Petroleum Resources
- Ministry of Forests
- Ministry of Agriculture and Foods
- Ministry of Environment
- Ministry of Industry and Small Business Development
- Ministry of Tourism

- Regional District of Central Kootenay
  - Planning Department
  - Economic Development Commissioner

Special Resource Analyses

Victoria based land and resource scientists assisted with biophysical analyses. Staff were from:

Ministry of Environment
- Terrestrial Studies Branch
- Air Studies Branch
- Aquatic Studies Branch

Tourism Consultant

G. David Hall
Economic Planning Group of Canada

Electoral Area H Advisory Planning Commission

1981

Corky Evans, Director
Wayne Peppard
Bruce McOuatt
Mathew Hudson
Richard Allin
George Swanson
Bob Cunningham, Chairman
Nora Rilkoff
Alf Anderson
Judy Ceroli
Bonnie Wadds

1982

Bob Cunningham
Wayne Peppard, Secretary, Alternate Director
Judith Ceroli, Treasurer
Bruce McOuatt, Vice-Chairman
Mathew Hudson
Richard Allin
Nora Rilkoff
Bonnie Wadds
Alf Anderson
Barbara Yeomans
Rory Lindsay, Community Involvement Officer
Corky Evans, Director

1983

Mathew Hudson, Chairman
Ted Fitchett, Vice-Chairman
Barb Yeomans, Treasurer
Wayne Peppard, Secretary
Walter Popoff
Bruce McOuatt
Nora Rilkoff
Bonnie Wadds
Corky Evans, Director

1984

Larry Avis
John Perepolkin
Barb Yeomans, Treasurer
Peter Duck
Susan Hammond
Wayne Peppard, Secretary
Della Fenkner
Mathew Hudson, Chairman
Rory Lindsay
Corky Evans, Director

Office secretary - Ailsa Rands

APPENDIX 2

TECHNICAL REPORTS PREPARED AS PART OF THIS PROGRAM

Background technical information which was assembled was printed in the form of Technical Reports and distributed to participating agencies, public groups and public libraries in the area as part of the public involvement program.

In addition to the Program's Terms of Reference, the Technical Reports are:

Tourism Analysis (Phase I and II)
Economic Opportunities Study
Rural Community Profiles
Population and Labour Force Analysis
Agricultural Resource Study
The Heritage Resources of the Slocan Valley: A Summary Report
Wildlife
Vacant Crown Land Outside Provincial Forests
Water Resources and Watersheds
Recreational Analysis
Ministry of Forests Background Report
Mineral Resources
Air and Water Quality

An updated summary of this technical information appears in a summary Technical Report which accompanies these Guidelines.

Additional reports prepared in conjunction with this program include:

Biophysical Resources of the Slocan Valley, APD Bulletin 28, Terrestrial Studies Branch, Assessment and Planning Division, Ministry of Environment, Victoria, B.C., May 1982

Mineral Resources Technical Report, by K.E. Northcote and Associates Ltd., for Ministry of Energy, Mines and Petroleum Resources, March 31, 1982

The Heritage Resources of the Slocan Valley: A Preliminary Evaluation of Significance Based on Research Potential, Public Educational Value and Integrity, Inventory and Evaluation Section, Heritage Conservation Branch, Ministry of Provincial Secretary and Government Services, April 28, 1982.

APPENDIX 3

SUBMISSIONS FROM PUBLIC GROUPS

Minutes of Public Meetings (including briefs)

First Set of Public Meetings, June 1 - 4, 1981
Dealing with introducing the program and requesting public input.

Second Set of Public Meetings, November 30 - December 3, 1981
Dealing with issues to be addressed by the plan and possible policy direction.

Third Set of Public Meetings, May 17 - 20, 1982
Dealing with proposed objectives and policy directions, alternative settlement strategies, and Valhalla allocation options.

Fourth Set of Public Meetings, February 21 - 23, 1984
Dealing with public responses to the Draft Plan.

From Forestry/Watershed Groups

Slocan Valley Watershed Alliance

Position Paper One "Purpose of Forestry/Watershed Study Group"

Position Paper Two "Model for Planning, Operating and Evaluating Forestry Activities in Watersheds

Position Paper Three "Model Data Base for Watersheds" including "Hydrological Recommendations for Community Watershed Development Planning": Dr. A.A. Salway, June 1980

Agenda, June 9, 1982 and "Proposed Action"

Agenda June 16, 1982 and "Log Hauling on the Back Road, Slocan Valley"

Agenda, June 23, 1981

Agenda, November 16, 1982

Letter to Advisory Planning Commission, identifying "issues" September 2, 1981

"Minutes and Attendance"

"Correspondence and Replies"

"Watershed Mangement, May 19, 1982

"Principles for Planning and Carrying out Forestry Activities, in the Slocan Valley Watersheds, February 11, 1982

"Land Use Requirements for Slocan Valley Watersheds", February 11, 1982

"Slocan Valley Watersheds - Planning Process and Required Details", February 11, 1982

"Outline of Planning Process for Watershed Management", July 22, 1982

"Watershed Management Process", July 22, 1982

Other Forestry/Watershed Groups

Watershed Protection in Slocan Valley, by South Slocan and District Water Users Steering Committee, September 28, 1981

"Woodlots - Some Points for Discussion" and "Discussion Paper on the Need for Woodlot Licences" by the Slocan Valley Appropritae Livelihood Foundation "Motion for Woodlot Regulation"

"Principles for Planning and Carrying out Forestry Activities in Perry Ridge Watersheds", Perry Ridge Water Users Association, to Mr. G. Allin, December 21, 1981

Concerned Citizens of the Perry's Siding - Lemon Creek Watersheds "Preliminary Statement of Concerns", June 2, 1981

From Valhalla Wilderness Society

"The Valhalla Proposal", Trail Wildlife Association, R.D.H. Willans, April 26, 1979

Case "A" and Case "B" to Dennis McDonald, Kootenay Resource Management Committee, August 1981

"A Tourism Strategy for the Slocan Lake Area" by University of Calgary, Faculty of Environmental Design, December 1979, Revised July 1981 (to Kootenay Resource Management Committee Chairman, August 10, 1981)

"The Valhallas" compilation of submissions to Honourable Rafe Mair, October 10, 1979 (to Kootenay Resource Management Committee Chairman, August 10, 1981)

"Some Implications to the 'Valhalla Proposal' to Forest Management in the Slocan PSYU" by B.C. Forest Services Planning Division, December 1975 (to Kootenay Resource Management Committee Chairman, August 10, 1981)

"An Outline of the History and Significance of Early Slocan Development", author unknown, (to Kootenay Resource Management Committee Chairman, August 10, 1981)

"Introduction to the Slocan Lake Proposed Park Area", author unknown, date unknown (to Kootenay Resource Management Committee Chairman, August 10, 1981

"Valhalla Synopsis Report", by Mr. R. Hanry, Parks Branch, February 1976 (to Kootenay Resource Management Committee Chairman, August 10, 1981)

"The Valhalla Plan, July 22, 1981

"The Valhallas: Some Reports Dealing with Mining, Logging, Socio-Economics and Parks", July 22, 1981

"Society Newsletters 1978 - 1978, Letters of Support 1980", July 22, 1981

"The Case for a Valhalla Park, by Erik Dafoe, July 22, 1981

"Rationale for a Valhalla Park, Village of New Denver, July 16, 1980

"Valhalla Marshes - North end of Slocan Lake" - Valhalla Wilderness Society - sent to Floyd Dykeman from Wayne McCrory, April 18, 1983

"Valhalla Park Petition" - Valhalla Wilderness Society Colleen McCrory to Dennis McDonald, Kootenay Resource Management Committee, June 1982

"A Critique of the Brief Submitted to Slocan Planning Process by Slocan Forest Products on September 19, 1981", Craig Pettit, November 12, 1981

Submissions by Various Groups

Brief submitted to the Slocan Valley Planning Program by Slocan Forest Products Ltd., September 28, 1981

Supplementary Comments to earlier brief by Slocan Forest Products, September 28, 1981

"Employment and Economic Impacts of the Slocan Mill of Slocan Forest Products" by Slocan Forest Products, March 1982, revised March 1984

"Watershed Dependency by Year" by Slocan Forest Products, March 1982

Correspondence from I.K. Barber, President, Slocan Forest Products, October 15, 1981 conveying excerpts from 1956 Sloan Royal Commission on Forestry and "A Report On and Some Impressions of Hemlock in the B.C. Interior" by J.A. McIntosh, 1955

"Major Road Network Plan", by Winlaw - Vallican Background Committee, Sean Rooney, Vallican Representative, May 26, 1982

"Transportation in the Slocan Valley", Transportation Committee, submitted by Susan Hammond, January 15, 1982

Bridge Concerns (from a public meeting, July 19, 1981) by Penny Tees and Larry Avis, July 22, 1981

Draft Brief of Slocan Valley Agricultural Concerns by Larry Avis and Gil Elder, July 22, 1981

The Slocan River Flooding Committee Brief (presented by Gary Burns and Heather Burns), July 22, 1981

Recreation Interest Groups Report No. 1 by James Warner, Director of Recreational Services, July 22, 1981, and letter dated January 20, 1982

Land Use in the Hills Area by Hills Community, July 22 1981

Hills Community Statement on Resource Management in the Slocan Valley by Hills Community, July 22, 1981

Community Services in the Hills Area by Hills Community, July 22, 1981

Valley Resource Society letter to Advisory Planning Commission dealing with "issues", September 2, 1981

Slocan Valley Community Arts Council Draft Brief circulated by Eleanor Hopper, August 11, 1981

"A Statement from the Kootenay Nuclear Study Group" by Brian M.M. Carpendale, October 13, 1981

"The Options and Alternatives Remaining to the Slocan Forest Products Mill to Prosper and Grow Without the Valhalla Timber are Considerable" by Kootenay Mountaineering Club, September 1981

Slocan Valley Outriders, letter to Rory Lindsay from Johnny Battaglio, August 27, 1981 and "Description of Horse Activities in the Slocan Valley"

Red Mountain Road Residents, Notes from a meeting, August 17, 1981

A Proposal for Fish Enhancement in the Slocan River Drainage by D.W. Hird

Slocan Valley Senior Citizens - letter to Honourable James Nielson, November 6, 1981, regarding medical clinic - letter from Susan Eyre to R. Lindsay, regarding senior citizen housing

Royal Canadian Legion - letter November 20th, regarding medical clinic

"Position of the Area 'H' Advisory Planning Commission and Director for Area 'H', October 1981

"Valley Views, Electoral Area 'H' Advisory Planning Commission, June 1983

"Implementation Scheme No. 1, by Corky Evans

"Deadly Slocan River", Power boating on the Slocan River, Susan Eyre, August 30, 1983

"Brief by Residents of Floating Homes on the Slocan River and Lake", Grant Trower, Jason Trower, Lamish Trower, Sandra Arnold, May 10, 1982

"Environmental Problems in Extra High Voltage Transmission", by Robert Lerch, March 3, 1982

"The Valhallas", "The Four Seasons Approach to the Valhallas", by an Ad Hoc Recreation Group from the Kootenays, November 1981

"The Need for a Valhalla Park", Corky Evans, May 30, 1982

Mining Industry in the Slocan Area, by the Chamber of Mines of Eastern B.C., September 1981

Slocan Valley Mining Group
- Mining Activity in the Slocan Valley
- Many copies completed by various enterprises and sent to V.C. Hanson
- Brief submitted by W. Cummings, "Mining in the Slocan Area", November 30, 1981
- Letter to R. Lindsay from W. Cummings, December 21, 1981
- Letter December 16, 1981 from Monte Lloyd, Denver Silver Ltd. together with comments and enclosures

---

Tourism Working Group, Brief "Part I: The Broad Issues Affecting Tourism in the Slocan Valley: submitted by Sean Rooney, Chairperson, September 1, 1981

"Tourism in the Slocan Valley", Brief to the Minister of Tourism, April 17, 1982

"The Newmarket Hotel Co. Ltd.", by Stephen Amsden, September 2, 1981

Lemon Creek Lodge - Cross Country Ski Trails

North Slocan Cross Country Ski Club - Cross Country Ski Trails Map

"Observations on the Issues Raised", Summary of verbal submissions, briefs and letters, by Rory Lindsay, Community Involvement Assistant

Individual Comments on Technical Reports, Issues, or points of concensus from Bob Ploss and Susan Eyre, Richard Allin, Jim Patterson, Mrs. Alex Strebchuck, Mary Hird, Chuck Varney, Shelley Adey, Wayne Peppard, Alex Berland, Bruce McQuatt

APPENDIX 4

SLOCAN VALLEY INTEGRATED WATERSHED PLANNING PROCESS

JUNE, 1984

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SECTION I

INTRODUCTION

Within the Slocan Valley a major issue is the question of how resources can be managed and extracted while protecting the water resource. This valley is long, narrow, and relatively steep sided, and is comprised of a number of small sub-drainages containing a variety of resources including surface water used for domestic and irrigation purposes, timber, minerals, wildlife and fish. Surface water is and will continue to be the primary source of domestic and irrigation water. Most streams in the valley are licensed for domestic water use and numerous small springs and seepage areas are important water supply sources.

Given the importance of timber, mineral, wildlife, and scenic resources as well as the water resource, a process is required which will enable all affected parties to participate in the preparation of management plans that which will reflect the importance of surface water and give primary consideration to minimizing risk to water quality, quantity and timing of flow.

This paper outlines a planning process to be followed prior to development in consumptive use watersheds. The process involves directly affected parties including water and forest licensees and government agencies in the preparation of management plans. Subsequent sections of the paper will outline:

1. the context of the watershed planning process;

2. the objectives of the watershed planning process;

3. general management concepts and standards as a basis for the planning process;

4. the watershed planning process;

5. roles and responsibilities of participants in the process.

Application of the watershed planning process as outlined in this paper will mean that Crown land in watersheds licensed for consumptive use will be planned and managed in an integrated resoure management basis with primary consideration given to protection of water quality, quantity and timing of flow. (Note: All references in the paper to water resources in the planning process implicitly means water quality, quantity and timing of flow.) Reference is most frequently made to decisions respecting logging, and in these circumstances the Ministries of Forests and Environment will lead the process. It is also intended that this process apply to other proposed developments within licensed watersheds and other agencies may lead in such circumstances.

The major hydrological concerns associated with land use activities relate to changes in quality and quantity of stream flow. Preservation of water quality is the major concern. Water quality changes are mainly the result of the erosion processes of mass soil erosion, surface erosion, and channel erosion. Soil movement, primarily from roads and skid trails can be a major source of sediment. Preservation of the quantity and timing of flow is also a concern. The impacts of forest harvesting are known in a general sense. Forest harvesting can alter the stream flow quantity and advance spring snow melt. Logging can have positive benefits for stream hydrology through increasing base flows and reducing evapo-transpiration losses in a watershed. Sufficient "state of the art" knowledge is available to plan watershed activities to keep changes within acceptable limits.

SECTION II

CONTEXT OF THE PLANNING PROCESS

Planning at various levels using the appropriate presentation scale is an ongoing part of the management program of a number of government agencies. Regional scale planning is conducted by the Ministry of Forests for Timber Supply Areas ("TSA") while the Ministry of Environment prepares strategic plans and Regional Districts prepare official settlement plans. All of these broader scale plans to some extent determine what occurs within smaller areas.

Strategic planning is conducted by both the Ministries of Forest and Environment, with present plans scheduled for the Ministry of Forests' Arrow TSA, and the Ministry of Environment's Kootenay-Slocan Region to be prepared in 1985. The products of these larger scale planning processes are illustrated below.

Ministry of Environments' strategic plans contain:

(a) ambient water quality objectives for major streams;

(b) ambient air quality objectives for selected airsheds;

(c) water allocations for consumptive use and instream resources based on various levels of water management;

(d) population objectives for priority species of fish and wildlife.

Ministry of Forests' Timber Supply Area Plans contain objectives and allocations for Timber, Range and Recreation, including:

(a) strategies, to achieve supply objectives;

(b) supply forecasts for quantified levels of timber, range, and recreation;

(c) land use map documenting assumptions for (a) and (b) above;

(d) operating areas (tenure locations for (a) and (b) above).

The final planning and decision-making authority in this watershed planning process lies with those agencies having statutory responsibilties:

(a) Ministry of Environment with respect to water management;

(b) Ministry of Forests with respect to forest management;

(c) appropriate agencies where other resources are involved.

The watershed planning process is consistent with the following government documents:

(a) "Guidelines for the Watershed Management of Crown Lands used as Community Water Supplies" (October 1980) approved by the Environment and Land Use Committee;

(b) "A Policy for the Integration of Forest and Water Mangement Planning on Crown Land within Community Watersheds" (in preparation by the Ministries of Environment and Forests).

Note: The watershed planning process as outlined by this paper has been prepared within the context of the policies of the Slocan Valley Development Guidelines as outlined under FORESTRY - Development in Consumptive Use Watersheds (pages 11 to 13) and under WATER MANAGEMENT sections (pages 18 to 20). These policies and related implemented measures should be referred to along with this appendix which details the watershed planning process.

OBJECTIVES OF THE PLANNING PROCESS

The goal of the watershed planning process is the integration of water management policies and objectives, with compatible forest management and other developments in the Slocan Valley. The task is to ensure that the planning is conducted and coordinated in a manner that will meet the public need and requirement to protect the water resource but also meets the need to produce other resources desired and required by the community. As noted earlier, however, primary consideration is given to minimizing risk to the water resource.

The following objective statements have guided the design of this process. (No order of priority intended).

1. The planning process must proceed from the general to the specific allowing for decisions based on progressively more detailed types of information. Thus site specific decisions occur within a broader context and feedback to the broader management programs.

2. The planning process must involve all directly affected parties and as such provide the mechanism for direct user input in plan preparation and decisions made by those agencies with statutory responsibility.

3. Environmental concerns, including the adherence to water quality and quantity standards must be paramount. (Forest harvesting, mining, and settlement developments will be based on sound environmental planning). All operational activities will be designed or modified as necessary to protect land productivity and give primary consideration to the water resource.

4. Protection of the water resource must be addressed during the following stages:

(a) pre-development;

(b) during development;

(c) post development.

5. The planning process must focus on the assessment of water and timber resources and be designed to incorporate other resource values such as minerals, wildlife, visual, etc., as required.

6. Some watersheds or parts of watersheds may be too sensitve to be logged within the present planning horizon or with currently available technology. This decision must be based on physical data and scientific approaches for synthesis. Drainages or portions of drainages that are very sensitive may be set aside or recognized as requiring additional or modified study or specialized harvesting techniques. With development of potentially acceptable harvesting methods in the future, a watershed planning process would be initiated prior to development.

7. The planning process must focus on decisions and requires identifying: natural and management induced risks to water quality; the location of water delivery systems; if, when, where and how harvesting is to occur; and specific responsibilities of the affected parties.

8. The planning process must address the major questions of contingency planning, implementation, supervision, and monitoring.

9. Water delivery systems must function to an appropriate standard to ensure efficient delivery and water quality protection. Design should allow for occasional sediment loads resulting from possible short term operational disturbances. A design standard essentially capable of handling natural sediment loads during the spring freshet period should be adequate.

10. Inventory requirements and survey intensity levels should be geared to specific concerns and required decisions. An identical data base in all watershed plans will not be necessary, but data should be specific to the decisions to be taken.

A common understanding is also essential concerning the known limitations within which the process must work. These include:

(a) funding;

(b) method of decision making within the planning process and for the plan approval;

(c) the commitments required to develop and implement the plan.

D. Communication Among Participants

Communication among participants is essential to successful implementation of the planning process. Roles and responsibilities of participants are outlined as part of this paper, however, an open free exchange of views and information among all involved must occur. Although the planning process provides for this to occur, specific methods are not identified. A variety of methods can be used, such as open houses, workshops, public meetings, etc. Care must be exercised in chosing the appropriate methods for communication which optimize opportunities for appropriate information prior to decisions.

E. Concepts To Be Considered in Process

Some key concepts are critically important for successful implementation of the watershed planning process. These are discussed below:

1. General Decision Inputs and Outputs at Every Planning Level

Figure 1 illustrates the inputs and outputs at each planning level within the process and their relationship. In the watershed planning process, in order to reach a decision and achieve desired results, the following factors must be considered:

(a) natural factors - those events which occur naturally;

(b) management induced factors - human activities connected with the proposal (the proposed activity);

(c) risk analysis - an evaluation of the cumulative affects of both natural and management induced activities on the hydrological process of sedimentation, water storage, and stream flow;

(d) water resource requirements;

(e) public input.

SECTION III

GENERAL MANAGEMENT CONCEPTS AND STANDARDS AS A BASIS FOR PLANNING PROCESS

A number of general management concepts and standards need to be identified as a base for all participants to understand and implement the planning process outlined. These concepts and standards are described below.

A. Trust Through Performance

There is a need for all parties to be committed to participate in good faith in the planning process and all subsequent operations. Initial success in the completion of watershed plans and operations will lead to refinements in the process followed in subsequent situations.

Development of trust among water users, timber users and government agencies will be an outcome of successful implementation of the planning process. Establishment of trust among the participants will require high standards in resource management and time in which to prove through performance the ability to maintain and protect the water resource. Successful implementation and monitoring of management plans must occur.

B. Information Reliability and Decision Confidence

This is a process to facilitate making and implementing management decisions and any such process will always involve judgements based upon the best available and relevant information. A frequent limitation in any planning process can be the availability of information at the desired scale and the cost of collecting additional information. Judgements are required in assessing adequacy of data which currently exists, defining what additional data to collect and deciding what costs are warranted in the circumstance. These judgements must result in decision confidence, or confidence in the suitability of present knowledge to enable good decisions. A major requirement of the planning process is to ensure the information collected is directly relevant to meeting the goals of water management, and has enough accuracy and precision to define acceptable levels of risk to water.

C. Required Understandings for Planning Process

Organizing any planning process requires a common understanding of:

1. purpose, objectives and rationale; (why?)
2. area to be planned; (where?)
3. a schedule of activities including deadlines; (when?)
4. roles and responsibilities of participants; (who?)
5. the tasks and the product to be produced; (what?)
6. the methods to be used; (how?)

Figure 2

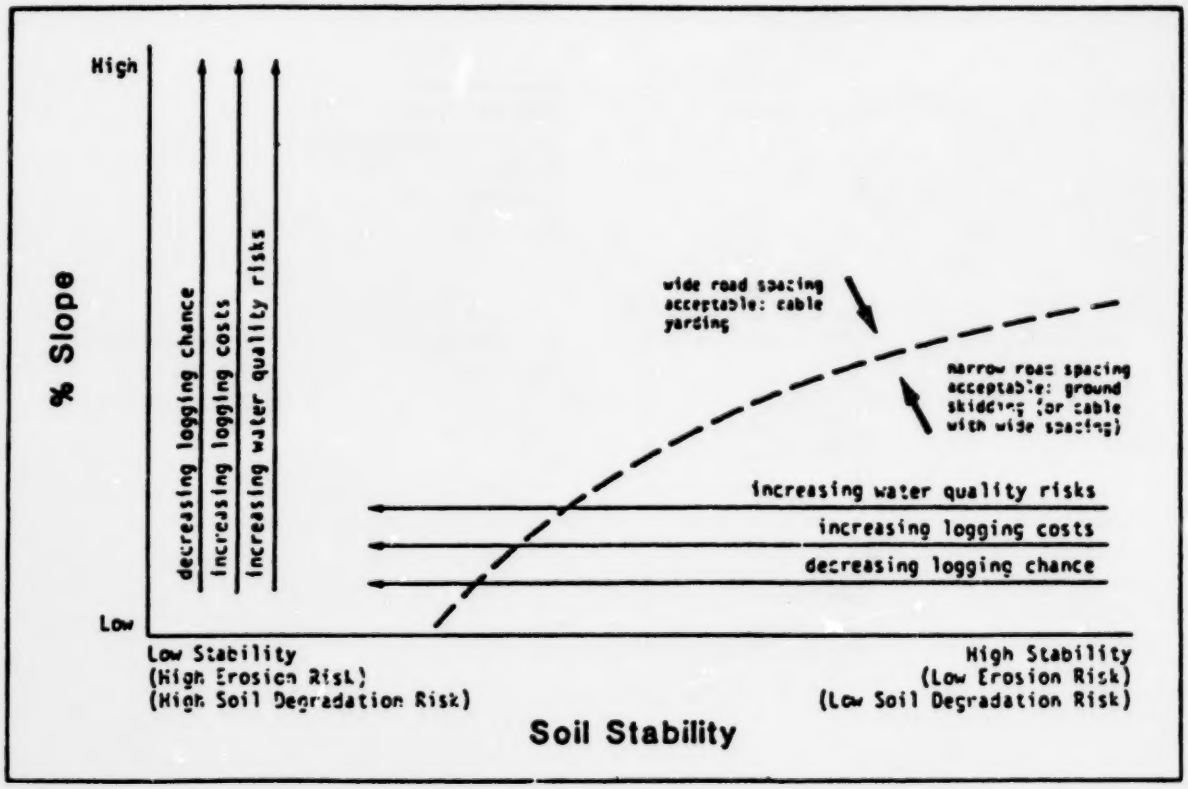
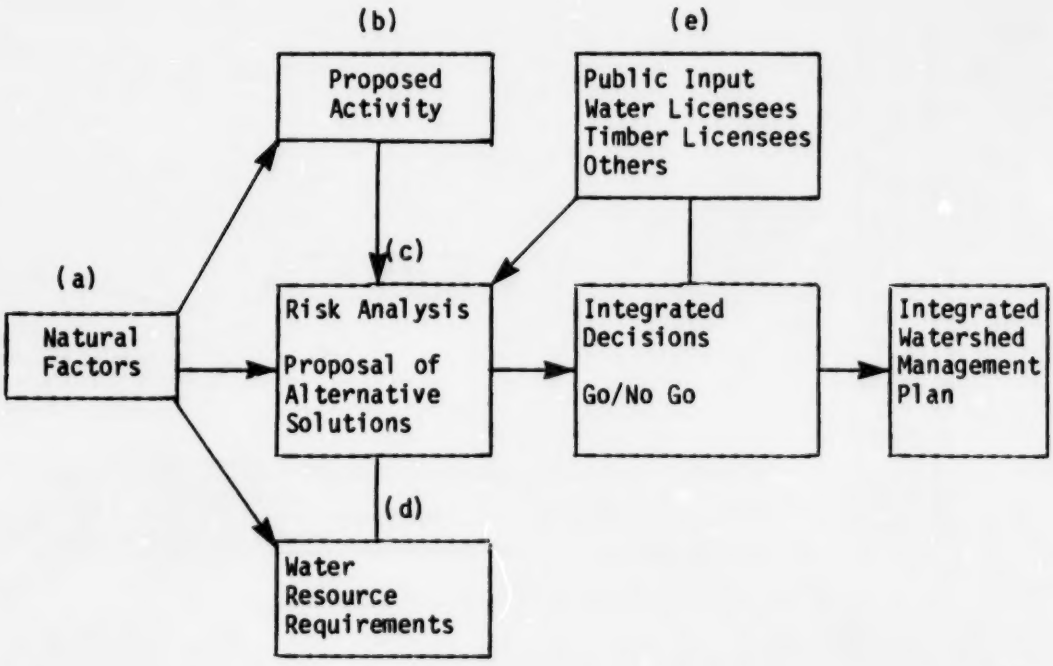

High
Low
% Slope
decreasing logging chance
increasing logging costs
increasing water quality risks
wide road spacing acceptable: cable yarding
narrow road spacing acceptable: ground skidding (or cable with wide spacing)
increasing water quality risks
increasing logging costs
decreasing logging chance
Low Stability
(High Erosion Risk)
(High Soil Degradation Risk)
High Stability
(Low Erosion Risk)
(Low Soil Degradation Risk)
Soil Stability

Figure 1 - General Decision Inputs and Outputs at Every Planning Level



2. General Interrelationship of Natural Factors and Management Induced Factors (Logging)

In the case of watersheds, the degree of flexibility which exists for integrating water and timber management is greatest on stable land with gentle slope and decreases as stability decreases and slopes increase. Figure 2 shows the relationship between logging chance and costs, physical characteristics, and water quality risks and is useful in understanding their relationship. Relationships between the factors of soil stability and slope are also important considerations when assessing potential impacts of other types of development.

3. Risk Analysis

Risk analysis can be defined as an assessment of probable consequences of proposed action relative to stated and accepted water resource objectives. Risk is both natural and management induced.

The planning process does not identify the precise risk analyses method to be used. An objective method will be one which results in a close comparison between results and decisions based on the use of the method, and the results of field operations. Many possible risk analysis methods are available with varying complexity. Some should be tested and with experience evaluated to determine which one(s) best meet the management needs. Evaluation of risk occurs in steps 3 and 5 of the planning process, however, determination of an appropriate risk analysis method is to be made at Step 1. The risk analysis method at the landscape level of planning may not be appropriate at the operational planning level and may be reconsidered and refined at Step 5. At higher levels of planning, tolerance to landscape variations can be high, but at more detailed and specific levels the tolerance to variation is less.

Methods of risk analysis lead to judgemental assessments and conclusions. It is possible for a hydrologist and soil scientist to assess risks in terms of accelerated erosion, surface erosion, and channel erosion. These risks can be mapped using air photographs. Such maps, combined with channel surveys, topographical maps and air photos are the tools for assessing risks.

A risk analysis implies the concept of a professional judgement based on sound scientific inference and local experience. Various modelling techniques may be used as tools in this analysis but do not provide an ultimate answer. In some cases, initial perusal will indicate the risks are minimal and there is no need for further studies.

4. Contingency Plans

The planning process shall produce a contingency plan that can be immediately implemented to deal with adverse induced effects on water. A contingency plan must provide for immediate response and may address longer term responses to damage. The contingency plan details will be an outcome of the operational planning level and will:

(a) address the responsibility of management agencies when a problem occurs to halt operations and take the necessary corrective action;

(b) address the role of the forest licensees;

(c) address the requirement for water source replacement for the duration of the problem.

Contingency plans shall be prepared in consultation by Forest licensees with all affected parties and be reviewed and endorsed by the Ministry of Forests and the Ministry of Environment.

5. Performance Standards

Plans will not detail the precise logging equipment used in harvesting but instead performance standards for operations are set and licensees must meet these performance standards. The following should be noted:

(a) contracts can state type of equipment, size of blade, etc. It is understood that this does not preclude in any way the use of forest engineering concepts in the planning process needed to develop performance standards for each operational plan.

(b) monitoring control exists such that if an operator does not meet performance standards, operations will be halted.

(c) flexibility exists such that if a licensee is not prepared to meet performance standards, Ministry of Forests will not issue the cutting permit.

F. Technical Guidelines

During the course of development of the Slocan Valley Integrated Watershed Planning Process, a need for Technical Guidelines to deal with information needs, data interpretations, technical issues and management issues was identified and agreed to by both the Ministries of Environment and Forests. The Technical Guidelines would have provincial application and will be a priority for both Ministries for the integrated management of watersheds and will likely be most useful following case studies. The experience in implementing this Integrated Watershed Planning Process are expected to contribute to the development and refinement of this Provincial Technical Guideline.

G. Baseline Environmental and Silvicultural Standards

Baseline environmental and silvicultural standards are written into management and working plans, 5-year development plans, and cutting permits. These follow the regional ecological classification guidelines and are modified in each situation based upon local professional expertise and experience.

H. Participant Responsibilities

All parties have a responsibility to identify and implement ways for integrating resource values in the future. In addition to specific roles and responsibilities which follow this includes (no order of priority implied):

1. Ministry of Environment

   (a) Water Management to coordinate the issuance of a new water licenses with the needs of timber management with a view to restricting licensees in areas of high conflict with the timber resource. In the same manner, to coordinate the issuance of new water licenses to be consistent with and sensitive to settlement strategies.

   (b) the need for information on suitable water intake and delivery systems for rural areas may lead the Ministry into a new information, education, and extension responsibility.

2. Ministry of Forests

   (a) to promote the use of silvicultural and logging systems with a low management induced risk, with a view to increasing the compatibility between timber and water management.

   (b) to remove from proposed logging areas where combined natural and management risks will likely compromise water management standards at all levels of planning.

3. Water Licensees

   (a) throughout the Valley, maintain as a matter of good practice water intakes and delivery systems to function to an appropriate minimum standard to ensure efficient delivery and water quality protection. Design should allow for background sediment loads from periodic natural disturbance.

4. Forest Licensees

(a) to develop and implement silvicultural and logging systems with a high degree of compatibility with water management needs (minimize the management induced risk).

(b) to assist the Ministry of Forests to identify areas within licensed watersheds where the potential risk for compromising water management standards is unacceptable, and to avoid operations in such areas.

SECTION IV

GENERALIZED PLANNING PROCESS

The planning process is illustrated in a general flow chart in Figure 3 and is expanded upon in the following sections. The process is not isolated and does occur within the context of timber supply area plans and and strategic environmental plans when and as these are undertaken, although this is not illustrated in Figure 3. This process allows for planning watersheds at two scales: for a landscape unit or grouping of watersheds; and for a more detailed, operational planning level. Landscape level planning occurs at the development plan level of the Ministry of Forests. Operational level planning occurs at the logging plan level. The process steps discussed below are listed in Figure 3. At each level, information is analyzed and decisions are made on whether watersheds or portions of watersheds should be available for logging. For those areas where a decision is made that logging is acceptable, performance standards are set and built into operational plans and contracts for operators. Implementation is closely supervised and monitored to ensure that performance standards, and hence watershed objectives are met.

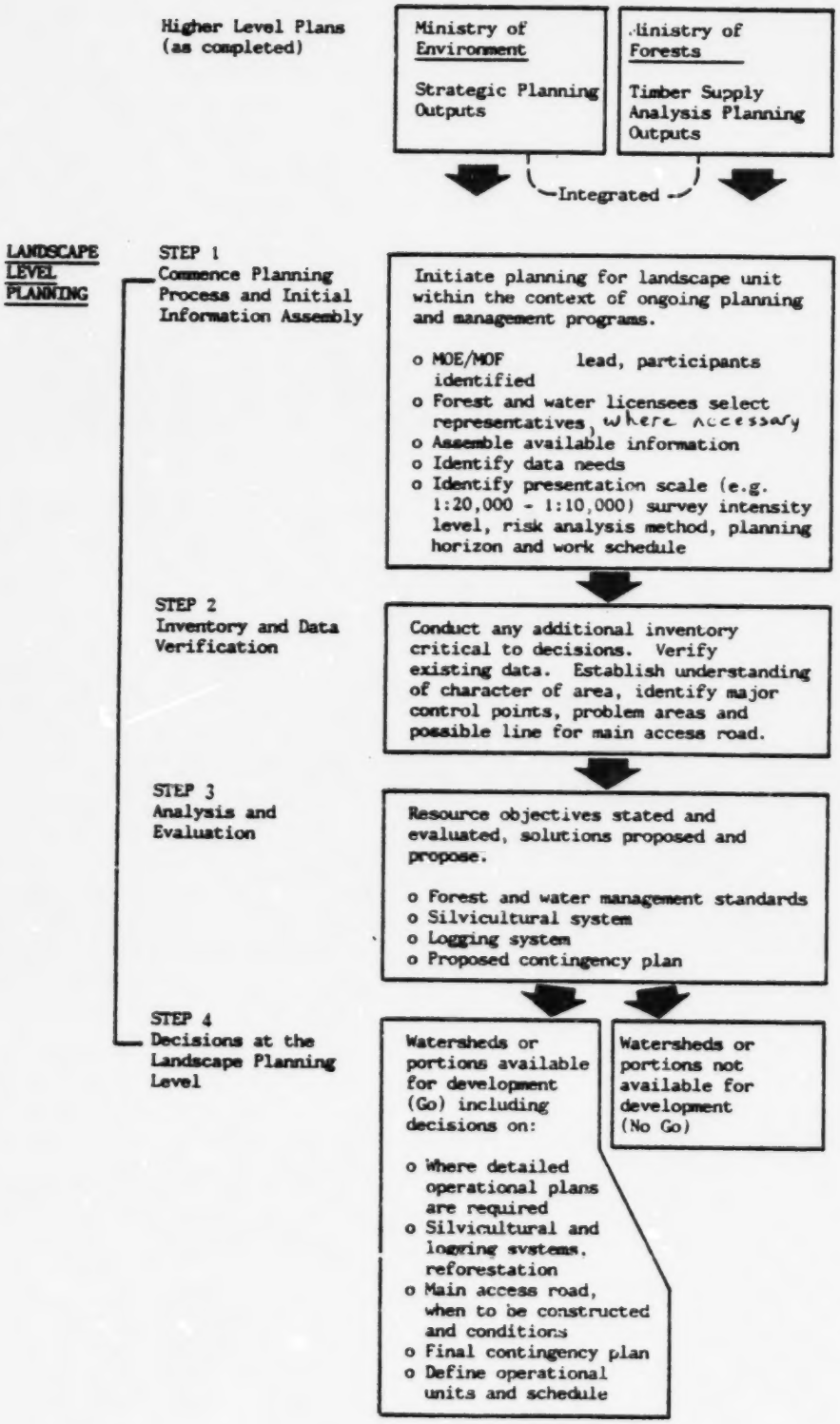
Survey intensity level of information used in the analysis is important as this needs to be appropriate to the level of decision to be made. As well, due to costs of information collection and mapping it is essential that the scale used be appropriate to objectives to avoid collecting, mapping, or tabulating unnecessary information. For operational unit planning, presentation scales of 1:20,000 to 1:10,000 in nonsensitve areas and 1:10,000 to 1:5,000 in sensitive areas and up to 1:3,000 in very sensitive areas. Typically, the 1:3,000 scale will be used only for critical portions of the development layout. It should be understood that it may be most appropriate to show only the most sensitive portions of a watershed at the very large scale. The planning process involves synthesizing technical information from several disciplines which may not be at a common map scale and analysing and arraying the information at a scale most suitable to each operational unit's requirements. For these reasons there is a need to retain some flexibility as to the scale selected. Survey intensity will be jointly determined by the Ministry of Forests and Ministry of Environment in consultation with other parties.

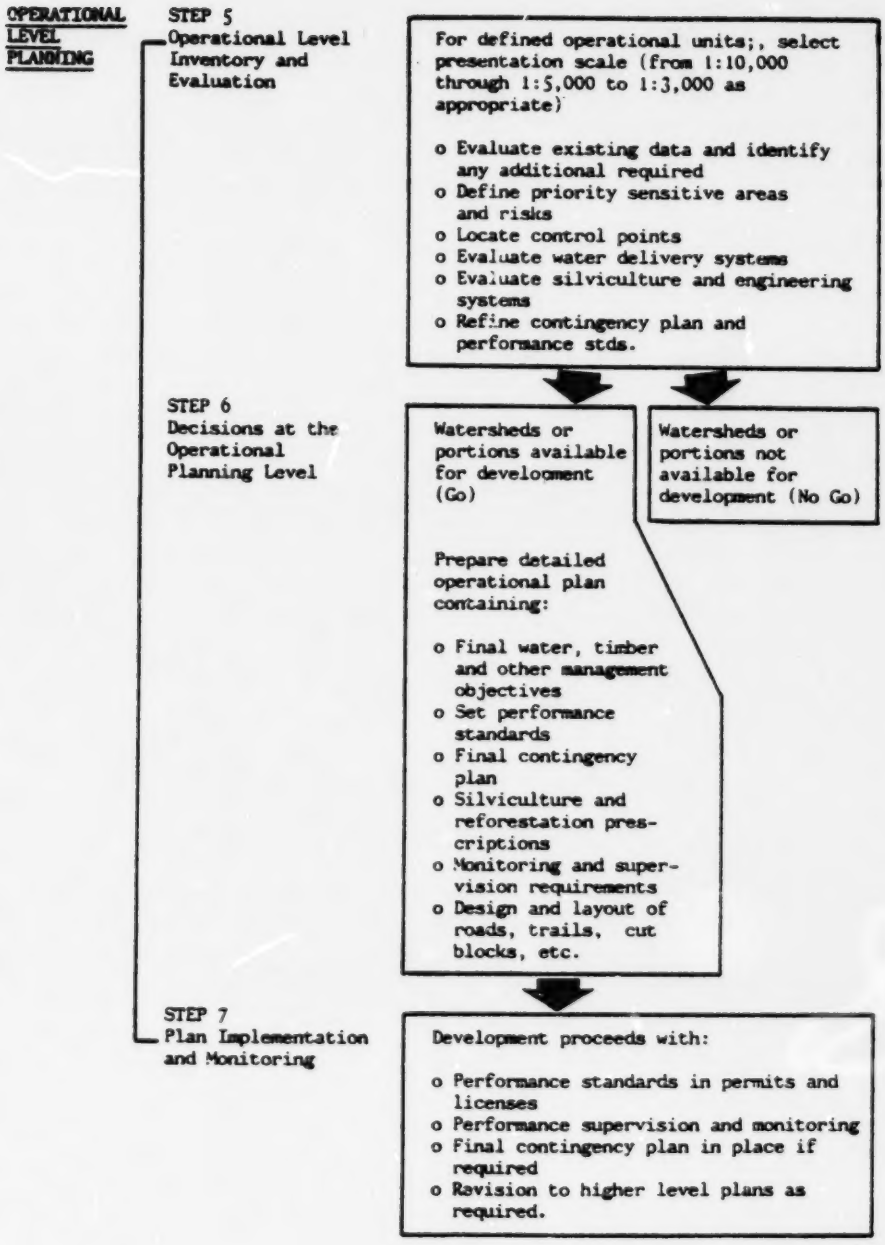
LANDSCAPE LEVEL PLANNING

Within the Ministry of Forests' planning hierarchy, considerable planning has taken place and this has allowed preliminary identification of landscape units for the Slocan Valley which are proposed for examination at a landscape unit scale. At the time of writing these have been approximated to be (a) Dayton Creek; (b) Dumont-Springer Creeks; (c) Elliot-Christian Creeks; (d) New Denver; (e) Perry Ridge; (f) Ringrose Creek; (g) Silverton; (n) Slocan Park; and (i) Springer-Climax Creek areas.

FIGURE 3

STEPS WITHIN THE INTEGRATED WATERSHED PLANNING PROCESS*


Higher Level Plans (as completed)
Ministry of Environment
Strategic Planning Outputs
Ministry of Forests
Timber Supply Analysis Planning Outputs
Integrated
LANDSCAPE LEVEL PLANNING
STEP 1
Commence Planning Process and Initial Information Assembly
Initiate planning for landscape unit within the context of ongoing planning and management programs.
o MOE/MOF lead, participants identified
o Forest and water licensees select representatives, where necessary
o Assemble available information
o Identify data needs
o Identify presentation scale (e.g. 1:20,000 - 1:10,000) survey intensity level, risk analysis method, planning horizon and work schedule
STEP 2
Inventory and Data Verification
Conduct any additional inventory critical to decisions. Verify existing data. Establish understanding of character of area, identify major control points, problem areas and possible line for main access road.
STEP 3
Analysis and Evaluation
Resource objectives stated and evaluated, solutions proposed and propose.
o Forest and water management standards
o Silvicultural system
o Logging system
o Proposed contingency plan
STEP 4
Decisions at the Landscape Planning Level
Watersheds or portions available for development (Go) including decisions on:
o Where detailed operational plans are required
o Silvicultural and logging systems, reforestation
o Main access road, when to be constructed and conditions
o Final contingency plan
o Define operational units and schedule
Watersheds or portions not available for development (No Go)


OPERATIONAL LEVEL PLANNING
STEP 5
Operational Level Inventory and Evaluation
For defined operational units;, select presentation scale (from 1:10,000 through 1:5,000 to 1:3,000 as appropriate)
o Evaluate existing data and identify any additional required
o Define priority sensitive areas and risks
o Locate control points
o Evaluate water delivery systems
o Evaluate silviculture and engineering systems
o Refine contingency plan and performance stds.
STEP 6
Decisions at the Operational Planning Level
Watersheds or portions available for development (Go)
Watersheds or portions not available for development (No Go)
Prepare detailed operational plan containing:
o Final water, timber and other management objectives
o Set performance standards
o Final contingency plan
o Silviculture and reforestation prescriptions
o Monitoring and supervision requirements
o Design and layout of roads, trails, cut blocks, etc.
STEP 7
Plan Implementation and Monitoring
Development proceeds with:
o Performance standards in permits and licenses
o Performance supervision and monitoring
o Final contingency plan in place if required
o Revision to higher level plans as required.

* This Figure is for illustration purposes only. For greater accuracy the reader should refer to the process steps as stated in the text of Appendix 4.

These landscape units have been identified as practical timber production units on the basis of ongoing agency and industry discussions and field analysis, as well as on a general road access plan developed by the Ministry of Forests. Analysis of the risk to ongoing production of existing quality water during and following logging must be assessed through appropriate inventory and analysis. If risk to water quality is too high, the area should be precluded from harvest or deferred until maintenance of water quality can be assured or is no longer necessary.

OPERATIONAL PLANNING LEVEL

Following inventory and evaluation of the landscape units, operational plans will be scheduled and then prepared for those watersheds potentially available for logging. Responsibilities for preparing operational plans, and collecting information required by government Ministries, will vary according to the forest tenure. Forest licensees will prepare operational (logging) plans which will be subject to the review of the Ministry of Environment and subsequent formal approval by the Ministry of Forests. At the operational planning level, analysis will be undertaken for priority sensitive areas, water delivery systems, logging layout and risks to water quality. On the basis of analysis, log/no log decisions will be made and for the logging areas, performance standards will be determined. The resulting operational plan will contain the performance standards to be shown in cutting permits, and details of schedule of harvest, silviculture, and water supply matters. On-site supervision and ongoing monitoring will assist to ensure that terms of the plan and requirements in contracts are met.

STEPS WITHIN THE PLANNING PROCESS

Steps 1 to 4 Describe Landscape Planning

Step 1 - Commence Planning

For each landscape unit, identify participants, set planning horizon and identify information needs. Assemble available information on:

soils;

hydrology;

vegetation;

climate;

forestry (volumes, age, species mix, problem types, operable forest proposed access, potential right of way acquisition);

water management (flow volumes, extent of licensing, number of licenses, intake locations, water systems identification);

minerals (geology, mineral potential, claims, existing developments);

land status;

visual landscape assessment;

special considerations, e.g., recreational, heritage;

archeological features;

ambient water quality;

fish and wildlife;

and other relevant information.

The planning process, subject to agreement by both Ministry of Environment and Ministry of Forests, could be led by either Ministry, or both, in the case of joint chairmanship. Forest and water licensees advised of commencement of the planning process as well as the opportunities for input.

Forest and water licenses each identify their leading representatives where formal representation is required.

Identify geographic areas, identify planning horizon and establish work schedule.

Mapping data will be at a uniform presentation scale, with a survey intensity level appropriate to management needs 1:20,000 to 1:10,000 for landscape units.) Data requirements will vary at each step depending upon the specific situation. For example, if stream supports no resident fish population, fish population surveys will not be necessary.

Reach agreement on risk analysis method and survey intensity level.

Step 2 - Inventory and Data Verification

User concerns and resource management concerns will be identified. Identify data requirements and make provisions for data collection. Verify existing data. Establish major control points and identify problem areas. Establish ecologic, hydrologic and engineering character of the planning unit. A preliminary line for the main access road may be identified here or in Step 3.

Step 3 - Analysis and Evaluation

State various resource sector objectives based on available information. Assess water management objectives (quality, quantity, and timing). Identify the range of suitable silvicultural systems. Evaluate engineering and economic feasibility. Identify natural and management induced risks to water quality. Evaluate water delivery systems (existing and proposed).

Clarify the degree of compatibility between water management objectives and the objectives of timber management and other uses. Propose initial operating standards for logging. Propose elements of contingency plan.

Step 4 - Decisions at the Landscape Planning Level

Planning participants recommend and officials in the Ministry of Forests, and the Ministry of Environment take decisions on the following subjects;

(a) whether watersheds or portions thereof are potentially available for logging and where detailed operational plans are required;

(b) silvicultural systems;

(c) logging systems;

(d) where logging is to occur, final location of main access road, time of construction, and contractual conditions to be met during construction;

(e) finalize and endorse contingency plan;

(f) define operational units for which detailed planning will be done. Identify and proceed to areas where detailed inventory is required; develop a schedule for area by area activities;

(g) prepare management plan for landscape unit; revise volume and rates of harvest as required;

(h) reforestation method and timing.

It is significant that watersheds within the landscape unit or portions thereof, can be separated into those potentially available for logging and those not available for logging. For those which are potentially available, operational planning will precede any forest harvesting. Thus broad planning for logging first occurs for each landscape unit, followed by preparation of detailed operational plans. The result will be a more refined degree of analysis and basis for performance standards than is the normal case in forest land management.

An operator must make a commitment to meet the required performance standards prior to the development of an operational plan.

Performance standards will become conditions on licences or permits where appropriate (i.e., contractual obligations).

Steps 5 through 7 describe operational planning. Several operational plans may be in preparation concurrently.

Step 5 - Operational Inventory and Analysis

Within each operational unit, as it is priorized for detailed operational planning, (a) select data scale(s) and types and identify priority sensitive areas and risks to water quality. Data requirements will vary depending upon the specific situation, (b) locate control points (e.g., landings, creek crossings, etc.) to facilitate further operational inventory and planning, (c) verify field data, as required, (d) refine performance standards for operations, (e) refine detailed contingency plan.

Step 6 - Decisions at the Operational Planning Level

(a) decisions on whether watersheds or portions thereof are to be developed according to detailed operational plans;

(b) silvicultural prescriptions;

(c) finalize water management objectives;

(d) performance standards for operations which are to be met in order to achieve the water and timber and mineral management objectives;

(e) finalize and approve the landscape unit scale contingency plan for water supply or amend as necessary for this operational unit;

(f) hydrological monitoring requirements;

(g) approval for secondary roads, landings, skid trails, etc.;

(h) Ministry of Environment will work with water licensees to advise improvements to water delivery systems;

(i) reforestation method and timing to be determined;

(j) prepare detailed management plan for operational unit which reflects (a) through (i) above and is specific concerning detailed layout of all primary and secondary roads, skid trails where necessary, and landings, drainage maintenance, cut block design, protection of the water resource, timing of all activities, and supervision requirements. Volumes and rates of logging identified are utilized to revise larger scale forest management plans. Performance standards will become conditions on licences or permits where appropriate (i.e., contractual obligations).

(k) refine and finalize detailed contingency plan;

Step 7 - Plan Implementation and Monitoring

Operations commence in this operational unit consistent with performance standards as expressed in cutting permit documents. Supervision, monitoring and evaluation of all operations occurs and improvements based on experiences in implementation and post-havesting treatment are reflected in subsequent contracts, in plan revisions, and in performance standards and contracts for other operational units.

Monitoring control will include the ability of the appropriate Ministry to require that corrective action be taken if an operator does not meet performance standards. Any damage to water is to be immediately corrected according to the agreed contingency response procedure.

The Ministry of Forests cutting permit document forms the formal basis for incorporating and implementing operational requirements. All such permits will require the review of the Ministry of Environment before being authorized by the Ministry of Forests. Similarly applications for water licenses will require review by the Ministry of Forests prior to issuance of licenses by Ministry of Environment.

Operations could be suspended and directions given for rectifying problems. Consequences can be specified under the terms of the cutting permit.

The Ministry of Energy, Mines and Petroleum Resources management control over mining includes powers such that no work other then surface exploratory work shall be commenced without:

(a) the written approval of plans by the chief inspector, and;

(b) a program for the protection and reclamation of the surface of land and watercourses affected by the mine, approved by the Reclamation Advisory Committee.

In addition, reclamation permits may contain conditions to be met in the development and a security deposit toward waste disposal or reclamation is required.

Specific responsibilities at each step of the planning process are shown in Table 1.

SECTION V

ROLES, RESPONSIBILITIES AND IMPLICATIONS

The key participants in this watershed planning process are: Ministry of Forests, Ministry of Environment, Ministry of Health, forest licensees and their contractors, and water licensees. The roles and responsibilities of each in the watershed planning process are summarized below. Other Ministries such as the Ministry of Energy, Mines and Petroleum Resources also have concerns and may be involved at the commencement of the process (Step 1), and thereafter primarily at decision points (Steps 4 and 6) and during monitoring (Step 7).

Subject to acknowledging resource agencies' statutory responsibility to manage resources and to make final decisions, the intent of this planning process is to seek participatory concensus among government ministries by all practical means possible. The Regional Manager of Forests and Regional Director of Environment in Nelson have a memorandum of understanding that cutting permits will not be issued until both are satisfied that all Ministries' concerns considered.

Ministry of Forests

Ministry of Forests' statutory responsibilities include management of provincial forest resources and management of provincial forest land to achieve a range of public benefits. Inventory, analysis and allocation of timber are part of on-going management responsibilities. In the watershed planning process, broad responsibilities include:

(a) responsible with the Ministry of Environment for initiation and execution of the watershed planning process in the context of on-going forest management programs;

(b) responsible for formal public involvement, for government liaison with the forest licensees and their contractors, and with agreement of the Ministry of Environment, approval of all operational plans before their implementation under this process;

(c) responsible for regular monitoring during and following operations, and where necessary requiring that corrective actions be taken when performance standards are not met.

The potential for integration of resource uses can be increased by Ministry of Forests by promoting the use of silvicultural and logging systems with a low management induced risk, with a view to increasing the compatibility between timber and water management, and by removing from proposed logging those areas where combined natural and management induced risks will likely compromise water management standards at all levels of planning.

Implications for Ministry of Forests include commitment to the data analysis and evaluation and public involvement in this two tier planning process. The performance standards must not only be articulated and contained in all licenses, permits, etc., but an on-going monitoring effort is required to ensure that the performance standards are met. In the event the performance standards are not met, Ministry of Forests' staff must require that corrective action be taken and where necessary a contingency response to restore acceptable water supplies occurs. Estimates of volumes of timber must be altered, when required, as more detailed planning is completed. Future harvesting of timber must be sensitive to existing and future settlement patterns, fish and wildlife protection requirements and potential resource conflicts.

Ministry of Environment

The Ministry of Environment has statutory responsibilities which include the inventory and allocation of water resources and the protection of aquatic habitats for fish and other organisms. In addition, there is also the possibility to plan surface water allocation to not only meet domestic, irrigation and industrial uses, but also maintain sufficient supplies so as to provide for a quality environment. All of these may be contained in a strategic plan, scheduled to be prepared for the Kootenay/Slocan in 1985. In the watershed planning process, broad responsibilities include:

(a) responsible with the Ministry of Forests for the execution of the watershed planning process in the context of on-going water management and strategic environmental planning programs;

(b) responsible for identification of affected water licensees and ensuring that operationsl plans reflect water management objectives;

(c) agreement with all operational plans under this process.

The Ministry of Environment can increase the potential for integration of resource uses by coordinating the issuance of new water licences with the needs of timber management with a view to restricting licenses in areas of high conflict with the timber resource. In the same manner, to coordinate the issuance of new water licenses to be consistent with and sensitive to settlement strategies.

Implications for Ministry of Environment include not only provision of data and participation in the planning, analysis and public involvement, but also the Ministry must work with water licensees and ensure the representation of water quality interests, including setting standards and participating in monitoring and evaluation functions. Future allocation of water must be sensitive to settlement strategy, minimum flows required to sustain aquatic eco-systems and potential resource conflicts.

Provision of public information on suitable water intake and delivery systems for rural areas is necessary and may lead the Ministry into a new information and education responsibility, especially with regard to new licenses.

Ministry of Health

The Ministry of Health has a statutory responsibility to protect public health as influenced by the quality of drinking water, and when new systems are approved, the Ministry of Health issues a certificate. The Ministry of Health does not have any resource management authority, but does have responsibility to ensure the B.C. Drinking Water Standards are met. The Ministry of Health will:

(a) participate in the planning process, provide input, and evaluate proposed contractual conditions for timber licensees to protect drinking water quality.

(b) where drinking water is involved, participate at Stage I in every planning process. Involvement in subsequent stages will occur as required, will usually be consultative and direct involvement will generally occur in cases affecting organized community watersheds or larger concentrations of licensed water users.

Implications for the Ministry of Health include the direct participation in watershed planning processes and through implementation and monitoring of the B.C. Drinking Water Standards to protect public health concerns. The Ministry will participate in the evaluation of natural and management induced risks as they relate to drinking water quality and watersheds.

Ministry of Energy, Mines and Petroleum Resources

The Ministry of Energy, Mines and Petroleum Resources has statutory responsibilities related to the management of mineral exploration and development which include licensing free miners, registering mineral claims approving access routes and regulating mine operations. The Ministry will:

(a) participate in the integrated watershed planning process, provide information on existing mineral claims and mining operations and mineral potential;

(b) where mineral claims, operating mines or high mineral potential exist, participate in Step 1 of every planning process. Involvement in subsequent stages of the planning process will occur, as required, and will usually be consultative.

Implications for the Ministry of Energy, Mines and Petroleum Resources include not only provision of data and participation in processes as required, but also the Ministry must ensure management of claims, access

routes and mine developments in a manner consistent with integrated watershed plans. The Ministry will be responsible for ensuring the representation of interests of the mining community.

Forest Licensees

Under existing forest management practices, forest licenses or forest firms have been granted an apportionment of available timber volumes (AAC), the calculation of which includes a contribution from these consumptive use watersheds. In the watershed planning process, forest licensees' major responsibilities include:

(a) participation in the preparation of landscape unit planning processes;

(b) collection of relevant information to prepare landscape and operational unit plans;

(c) preparing, in consultation with other affected parties, operational unit plans for areas potentially available for logging;

(d) when operational plans are approved, supervising all operations to ensure compliance of staff and contractors with agreed upon performance standards;

(e) preparing contingency plans and responses in the event of undesirable impacts.

Forest Licensees can increase the potential for integration of resource uses by developing and implementing silvicultural and logging systems with a high degree of compatability with water mangement needs (minimize the management induced risk).

Specific responsibilities at each step of the planning process are shown in Table 1.

Implications are that timber users will be required to recognize the benefits accrued to individuals and the province from a high quality water resource and that water has been allocated to others just as timber has been to the forest companies. Timber users must recognize that access to timber in sensitive watersheds will only be possible though participation in the planning process and commitment to the performance standards and other specifications which result. Direction and supervision of all contractors and rigid adherence to the terms of operational plans, cutting permits, etc. will be necessary. Contingency responses must be rapid and effective in the event of watershed damage.

Water Licensees

Under existing water management legislation, individuals or communities are granted water licenses which are entitlements to use up to a specified volume of surface water. The licenses do not guarantee that volume will always be available particularly during unusual drought conditions, or that quality will always be of a high standard. Frequently, streams in the Slocan Valley carry sediment loads during the freshet period under natural conditions. The water license does not convey to the licensee control over uses which occur in the watershed or water supply area. The planning process is intended to ensure that significant changes to water quantity, quality and periodicity are minimized wherever development is considered in the watersheds licensed for consumptive use.

In the watershed planning process, the major responsibilities of licensees include:

(a) participation on the understanding that maintenance of water quality is a primary consideration and also that logging has economic benefit to the community, region and province and needs to occur when environmental standards can be met;

(b) when appropriate, selecting representative(s) who will represent them and keep them informed in the planning process;

(c) collect and provide relevant information on their waterworks systems.

Water Licensees can reduce the potential for conflict by ensuring water intakes and delivery systems function to an approprite standard to ensure efficient delivery and water quality protection. Waterworks should be constructed to an acceptable standard which allows for background sediment loads from periodic natural events.

Implications for water licensees are that the planning process will provide opportunities for input at landscape and operational planning levels. Directly affected water users may need to select their representative(s) to praticipate in the details of the process on behalf of the group. Methods by which water licensees are represented may vary from planning exercise to planning exercise.

TABLE 1
GENERAL ROLES AND RESPONSIBILITIES IN THE
WATERSHED PLANNING PROCESS*

Stage in Process	Ministry of Forests	Ministry of Environment	Ministry of Health and Ministry of Energy, Mines and Petroleum Resources	Forest Licensees	Water Licensees
LANDSCAPE LEVEL PLANNING					
STEP 1					
Commence Planning Process and and Initial Information Assembly	- Lead agency for initiation and execution of process - Advise forest and water licensees of commencement, timing and methods of input - Establish planning participants, work program schedule, area, methods of operation - Assemble existing data and identify additional data needs - Identify pertinent forest information (i.e. potential volume, timing, operable areas, proposed access and alternatives, etc.) - Determine appropriate risk analysis method, presentation scale, survey intensity level	- Lead agency for initiation and execution of process - Advise forest and water licensees of commencement, timing and methods of input - Establish planning participants, work program schedule, area, methods of operation - Assemble existing date and identify additional data needs - Identify pertinent water management and delivery information (i.e., volumes, quality, licensing, location of intakes, etc.) - Determine risk analysis method, presentation scale, survey intensity level	- Participate in initial stage of planning process and following steps as appropriate - Health identifies drinking water standards, and possible problems or considerations - Mines identifies mineral claims, mineral potential, existing development, etc. (Note: The level of involvement at each following step is at the discre- of the Medical Health Officer or senior staff in Minerals Branch, or at the request of other resource agencies)	- Participate in planning process - Contribute any particular data or knowledge concerning opportunities and constraints in the landscape unit	- Participate in planning process - Where required, select representative(s) from the landscape unit to represent and inform others throughout the planning process - Advise of any particular opportunities and constraints in the landscape unit - Participate with the Ministries of Forests and Environment in defining the form and methods of providing public input into this watershed planning process

* This Table is for illustration purposes only. For greater accuracy, the reader should refer to the process steps and roles and responsibilities as stated in the text of Appendix 4.

Stage in Process	Ministry of Forests	Ministry of Environment	Ministry of Health and Ministry of Energy, Mines and Petroleum Resources	Forest Licensees	Water Licensees
STEP 2					
Inventory and Data Verification	- Establish ecologic, hydrologic and engineering character of the landscape unit - Identify data requirements and make provision for data collection - Conduct or assist with field verifications as necessary - Verify existing data, identify problem areas - Field examination of landscape unit, as required	- Establish ecologic, hydrologic and engineering character of the landscape unit - Conduct any additional inventory which is critical to decisions - Conduct or assist with field verifications as necessary - Field examination of landscape unit, as required	- As appropriate, bring forward any additional data or inventory which is critical to decisions - As appropriate, participate in field examination of landscape unit	- Bring forward user concerns & objectives - Assist with provision of additional data or field verification as necessary - Participate in field examination of landscape unit, as required	- Bring forward user concerns - Assist with provision of additional data or field verification as necessary - Participate in field examination of landscape unit, as required
STEP 3					
Analysis and Evaluation	- Conducts analysis and evaluation - State resource sector objectives - Identify biogeo-climatic zone, sub-zone, define ecological limits - Identify major control points extent of operable forest, preliminary location of main access road; potential mix of logging systems proposed	- Conducts analysis and evaluation - State resource sector objectives - Evaluate potential for optimizing watershed management objectives (clear/partial cut) size, shape, and slope orientation of forest openings, evaluate water delivery systems and propose devices to protect water quality - Propose operational standards and propose elements of contingency plan	- As appropriate, state resource sector objectives - As appropriate, Health identifies existing drinking water quality	- Participate in relevant analysis and evaluation tasks - Contribute to proposed operational standards and proposed elements of contingency plan	- Individual users or representatives inform and, as relevant, with analysis and evaluation tasks - Contribute to proposed operational standards and proposed elements of contingency plan

Stage in Process	Ministry of Forests	Ministry of Environment	Ministry of Health and Ministry of Energy, Mines and Petroleum Resources	Forest Licensees	Water Licensees
STEP 3 (contd)					
	Subject to Step 5 information, do the following: - Access evaluated and procedures defined - Identify and evaluate range of silvicultural systems available - Evaluate engineering and economic fessibility of forest openings for water management objectives - Evaluate potential and feasibility, identify natural and management induced risks - Propose operational standards and elements of contingency plan				
STEP 4					
Decisions at the Landscape Planning Level	- In consultation with users, recommend on: areas potentially available for logging; silvi-cultural systems; mix of logging systems; location of main access road; when constructed and conditions to be met; final contingency plan; definition of operational units; reforestation; management plan for landscape unit containing performance standards - Revise volume and rate of logging - Decisions to be contained in land-scape unit plan presented and discussed at public meeting. Input noted	- In consultation with users, review and recommend on: areas potentially available for logging; silvi-cultural systems; mix of logging systems; location of main access road; when constructed and conditions to be met; final contingency plan; definition of operational units; reforestation; management plan for landscape unit containing performance standards	- Where a participant at this step of the process, contributes to standards in management plan, etc.	- Discuss decision areas with planning partici-pants. Makes commitment to management plan and contingency plan.	- Discuss/decision areas with planning participants.

Stage in Process	Ministry of Forests	Ministry of Environment	Ministry of Health and Ministry of Energy, Mines and Petroleum Resources	Forest Licensees	Water Licensees
OPERATIONAL LEVEL PLANNING					
STEP 5					
Operational Level Inventory and Evaluation	- Assists timber licensees with operational inventory and analysis as appropriate - Along with forest and water licensees determine scale - Refine timber management objectives - Develop silvicultural prescriptions - Identify specific control points (landings, creek crossings), develop preliminary grade lines for spur roads - Propose refined performance standards - Staff field verify data as required	- Assists timber licensees with operational inventory and analysis as appropriate - Along with forest and water licensees determine scale - Refine water management objectives - Planning; team field verifies data as required	- When a participant at this step of the process, refines management objectives	- Within defined operational units, consistent with the landscape unit management plan commences operational level inventory and evaluation in consultation with planning participants, and prepares proposed operational plan - Identifies natural and management induced risk in consultation with others - Defines preferred equipment choices relative to landscape unit performance standards, skid trails, etc.	- Provide input regarding data requirements and appropriate scale pertinent to the decisions to be taken - Input to planning participants & forest licensee on decisions to be contained in draft operational unit plan
STEP 6					
Decisions at the Operational Planning Level	- In consultation with users, Ministry officials review the forest licensee's proposed operational plan and decide on: areas potentially available for	- In consultation with users, Ministry officials review the forest licensee's proposed operational and help decide on: areas potentially available for	- When a participant at this step of the process, contributes to standards in management plan	- Discuss refinements to proposed operational plan with planning participants and water licensees. Makes	- Discuss with the planning participants - Participate in public involvement process as

Stage in Process	Ministry of Forests	Ministry of Environment	Ministry of Health and Ministry of Energy, Mines and Petroleum Resources	Forest Licensees	Water Licensees
STEP 6 (contd)					
	logging; silvicultural, reforestation, and logging systems; management objectives and performance standards; final contingency plan; design and layout of roads, cut blocks, trails, etc.; monitoring and supervision requirements. These and other elements of operational plan are discussed with directly affected water licensees	logging; silvicultural, reforestation, and logging systems; management objectives and performance standards; final contingency plan; design and layout of roads, cut blocks, trails, etc.; monitoring and supervision requirements. These and other elements of operational plan are discussed with directly affected water licensees - Work with water licensees to advise of improvements to water delivery systems		commitment to management plan and contingency plan	considered appropriate - Assist in advising interested individuals interested individuals as necessary - Make commitments respecting any required actions re: affected water intakes and distribution systems
STEP 7					
PLAN IMPLEMENTATION AND MONITORING	- Ensures that all performance standards and provisions of plan are met in licences, permits or other approvals - Ongoing monitoring and evaluation of all road construction and operations - Prescriptions and standards are assessed, evaluated, and revised as necessary - Higher level plans are revised as required - Invoke contingency plan, if required	- All provisions of plan are reflected in licenses, etc. - Ongoing monitoring as required. Maintain records and evaluate - Prescriptions and standards assessed and revised as required - Higher level plans are revised as required - Invoke contingency plan, if required	- May monitor and advise as appropriate	- Ensures that all operations are consistent with plan. Contracts contain performance standards and contractors are informed and supervised - Contingency plan in effect if needed	- Advise forest licensee and any Ministries of any concerns as provisions of plan are implemented

APPENDIX 5

LANDSCAPE MANAGEMENT

Management of landscape and visually significant areas on Crown land is a province-wide program of the Ministry of Forests. In visually significant areas, the Ministry applies its landscape planning approach to the development and/or approval of resource access roads, approval of harvesting patterns and selection of silvicultural treatments.

The accompanying primary visual areas map shows the visible landscape as seen from highways, settlements, Slocan Lake and Idaho Peak, with areas of low landscape sensitivity (due to greater viewing distance, obliqueness to line of sight, low landform relief) omitted. Landscape sensitivity is a relative measure that reflects the physical factors (e.g., steepness, uniqueness) and the viewer-related factors (e.g., viewing distance and duration) of the landscape. Visual Quality Objectives, are also shown.

The Visual Quality Objectives guide management by specifying the degree of alteration (measured in terms of visual contrast with the surrounding landscape) that is acceptable for each landscape unit. Upon examining the accompanying map, it will be noted that Partial Retention is the predominant VQO applied in the Slocan Valley.

Definitions of the Visual Quality Objectives (VQOs) used for the Slocan Valley are as follows: (see also Ministry of Forests' Forest Landscape Handbook, available from Queen's Printer at a cost of $10.00).

Preservation

The Preservation VQO allows activities, such as maintenance of minimal facilities (recreation sites, trails), that enhance natural wildland values. Alterations beyond this, such as logging, are not acceptable.

In the managed forest, preservation may apply to relatively small areas where landscape values are high and outweigh other natural resource values. Examples might include some land/water interfaces, special features of visual, historical, geological, biological or educational importance, areas of value for recreation.

Retention

The Retention VQO requires that management activities or alterations not be visually apparent. The goal is to repeat the line, form, colour and texture of the characteristic landscape.

In the managed forest, retention may apply to areas where landscape values are high and where changes may be discernible but not clearly visible, e.g. land/water interfaces, vistas, views and focal areas.

Partial Retention

The Partial Retention VQO requires that alterations remain visually subordinate to the naturally and/or culturally established landscape. Repetition of the line, form, colour and texture is important to ensure a blending with the dominant elements.

In the managed forest, partial retention may apply to areas where landscapes are of aesthetic importance and where management activities generally can match the landscape character and do not cause an obvious intrusion, e.g., where landscapes can absorb change.

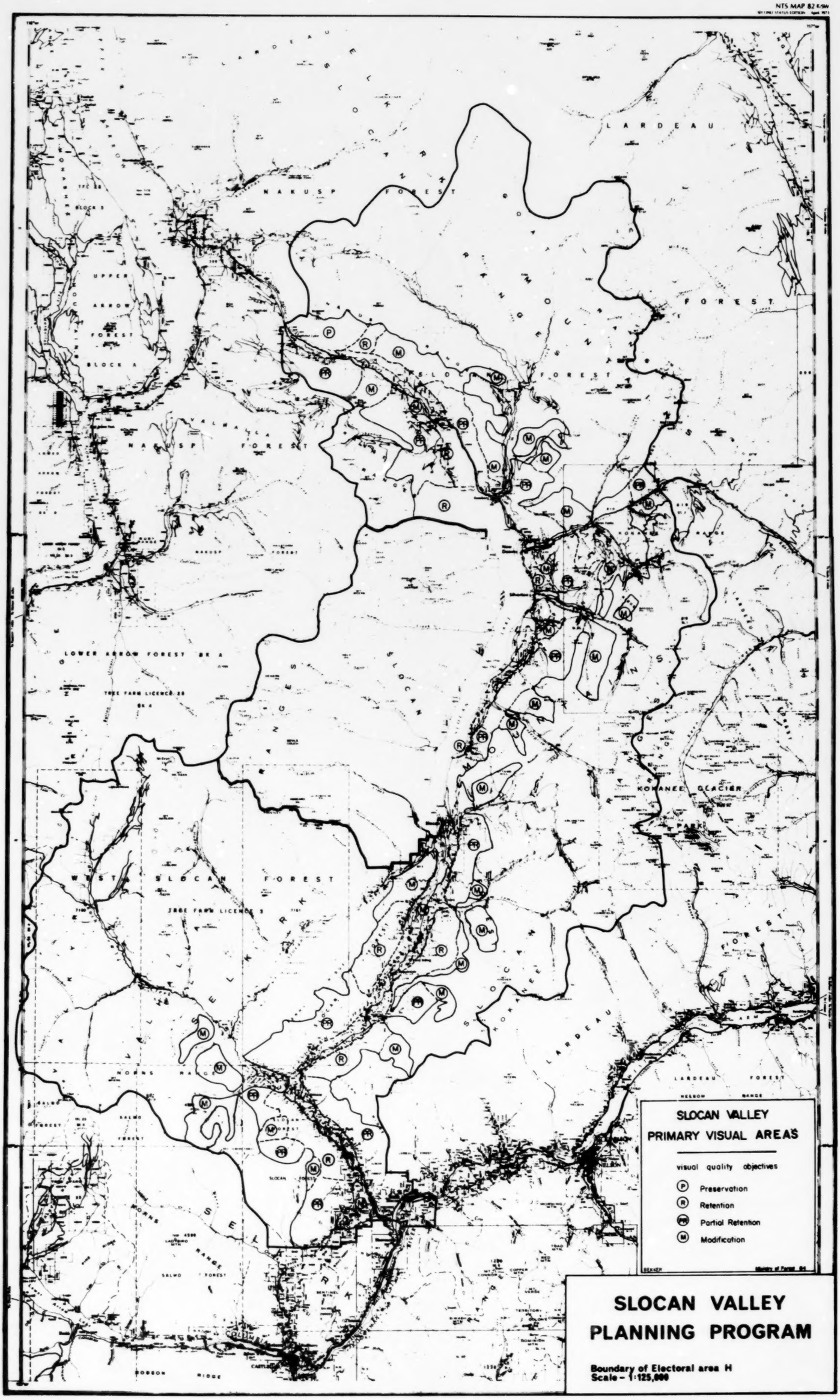
Modification

The Modification VQO allows alterations to visually dominate the naturally established landscape. However, alterations must borrow from natural line and form to such an extent and on such a scale that they are comparable to natural occurrences.

In the managed forest, modification may apply to areas where landscapes are more common and where management activities can blend with existing dominant lines, shapes and forms; it applies in particular to first-pass forest development.

These VQOs will be reviewed for their appropriateness in ten years.

The accompanying map illustrates VQOs at a broad scale of 1:125,000. Refinements to this broad scale map will occur as more detailed landscape analyses are done in the context of logging development plans.


NTS MAP 82 K/SW
LARDEAU
NAKUSP FOREST
UPPER ARROW FOREST
BLOCK A
FOREST
LOWER ARROW FOREST BLOCK A
TREE FARM LICENCE 23
KOKANEE GLACIER PARK
WEST SLOCAN FOREST
TREE FARM LICENCE 3
SLOCAN VALLEY
PRIMARY VISUAL AREAS
visual quality objectives
P Preservation
R Retention
PR Partial Retention
M Modification
SLOCAN VALLEY
PLANNING PROGRAM
Boundary of Electoral area H
Scale – 1:125,000
MAP 8